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TEXAS

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BY

HOLMAN TAYLOR, B. S., M. D.

AND

R. B. ANDERSON, JR., A. B., M. D.

FORT WORTH, TEXAS

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Texas State Journal of Medicine

EDITORIAL OFFICES: 1404 W. El Paso Street, Fort Worth, Texas
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Vol. XXXVI **May, 1940** **No. 1**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

Dallas Is Ready and Waiting for her guests, the medical profession of Texas, who will visit with the Dallas County Medical Society May 13-16. We have very impressive assurances of that fact. The General Arrangement Committee, and such local committees as have had occasion to act, have been very enthusiastically on the job. If anything has been left undone which will contribute to the pleasure, convenience and profit of their guests, neither the State Office nor the aforesaid General Arrangement Committee can think of what it is. That there will be a large attendance on the meeting, probably the largest attendance the Association has ever had at an annual session, seems to be the opinion of all who have given the matter any thought. Certainly the medical profession of Dallas county is in a most hospitable mood, and right now wishes above all things to have the opportunity to put over something else big.

DALLAS

The program for the meeting was published in the April number of the JOURNAL. So far, we have not been advised of any serious errors therein. It is expected that the program will be produced as published. Those who expect to attend the meeting will do well to study the program before arriving in Dallas, that they may be in a position to utilize their time to their own advantage. There are so many attractions so constantly being presented that in no other way can anyone take full advantage of their attendance on the meeting.

Late inquiries disclose that there are still ample hotel accommodations in Dallas. However, these accommodations are diminishing rapidly, and those who are wise will do well to make reservations without delay. If the hotel of choice cannot accommodate, a letter should be addressed to Dr. R. A. Trumbull, Medical Arts Building, Dallas, who is chairman of the committee on hotels. He will see that everybody is satisfied in the matter of hotel accommodations.

It is important to remember that registration and information will be at the Hotel Adolphus, designated hotel headquarters. All of the General Meetings, except the opening General Meeting, will be held there, as will the meetings of scientific sections. The scientific and technical exhibits will be on display in the Adolphus, and the House of Delegates will meet there. The first act of any visitor during the meeting should be to register, secure needed information, and leave information at the registration booth as to their prospective whereabouts while in the city. Complete arrangements have been made for the transmission of telegraphic and telephonic messages to those in attendance on the meeting, not to mention the proper distribution of mail. This service cannot be rendered except the information requested is at the place of registration.

The Woman's Auxiliary will have their headquarters and hold their meetings in the

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Baker Hotel, just across the street from the Adolphus.

The House of Delegates will meet in the Empire Room, Lobby Floor, of the Hotel Adolphus, Monday, 10:00 a. m. Probably the next meeting of the House will be Wednesday night, and the last meeting Thursday morning. The meetings of the House of Delegates are always so arranged as to interfere with the scientific work of the Association as little as possible. Well directed, prompt and intelligent action on the part of all members of the House is necessary in order to accomplish this result and at the same time not neglect the very important business of the Association. Delegates are important officials of the Association and should respect their responsibility. They generally do.

There are no special railroad or bus fares for the meeting, but the usual summer reductions have been made and will be available.

It is important to remember that no one can register at the annual session for whom dues have not been paid to the State Secretary. It is not enough to have paid them to the county society secretary. Payments cannot, by law, be accepted at the registration desk except upon the written permission of county society secretaries.

The distinguished guests for this year form a most notable group. They will be worth hearing. The American Medical Association will be represented by its very noted and notable secretary and general manager, Dr. Olin West, formerly Secretary-Editor over in Tennessee. He will have some important matters to present to the assembled membership of the Association.

The clinical luncheons will be again stressed. The general meetings, clinical luncheon meetings, and the combined sections meetings, have been merged into a succession of interesting and informative events that no member can well afford to miss. There will not only be information, but interest as well, which is not always the case at a medical meeting.

An item well worthy of special consideration will be the scientific exhibits, and the moving picture exhibits. It seems that these two are of special moment this year. The technical exhibits will be all that they have heretofore been and more.

In the midst of all of this scientific activity, entertainment has not been neglected. Indeed, far from it. In addition to the usual President's Ball and Reception, there will be an informal reception given by Dallas physicians and their wives, and a notable entertainment by the Dallas County Medical Society. The former will precede the President's Reception and Ball, and the latter will take place Wednesday night, at a night spot in the edge of the city. We are not to disclose at this time any of the special features of this entertainment.

There will be the usual golf tournament, and the usual trap shoot. Anybody who wants to know about golf should communicate with Dr. P. M. Girard, 3701 Maple Ave., Dallas, and those who are interested in the trap shoot should write to Dr. Bedford Shelmire, Medical Arts Building, Dallas.

A number of alumni associations and special groups will hold special meetings, with variations, concerning which announcement will be made later.

Memorial Services will be held in the Hotel Adolphus on Tuesday afternoon. We make a special plea for a large attendance on these services.

Again we say, everything is ready at Dallas, and as many of our members as may do so are cordially invited and earnestly urged to be present.

New York Next.—The State Medical Association will conclude its annual session May 16. The annual session of the American Medical Association opens in New York, June 10. The time involved in these two fine meetings is spaced nicely. It could not be better. There is sufficient interval between the two to permit us to go back home, collect a little money, and arrange for an extension of credit and an absence of anywhere from a week to a month or so, before taking off for New York City.

There is little that we can say of interest in connection with this meeting except we go into such detail as will not be permissible in these columns. *The Journal of the American Medical Association* will, in an early number, give full particulars. Suffice it to say here, that the House of Delegates of the American Medical Association will convene Monday, June 10. The scientific Assembly will begin its work on Tuesday evening, June 11. In the meantime, there will be more activities than anyone attending can encompass in the time allowed. The meeting will close June 13. The Fair will be open and going good. Many of us did not see it last year. We are advised that it will be even better this year, and certainly it is more immediately available to us. We have a splendid excuse for being thereabout, and being thereabout it will be no needless expenditure of funds to visit the Fair. And then there are the wonderfully fine clinics in the several large medical centers in that section of the country. It would seem that the proposition resolves itself into one of funds. There can

be no doubt about the advisability of the trip. We are hopeful that a good many of our members will be able to secure the necessary funds, and make the trip.

Our Transportation Committee has selected the Missouri-Pacific to St. Louis, and the Pennsylvania from there to New York, as the official route. It is hoped that our members who go by rail will concentrate on the official route, that they may be company for each other. The time on the trip from Fort Worth, for instance, is as follows: The selected train leaves Fort Worth at 3:05 p. m., say June 8, arrives in St. Louis at 9:15 a. m., June 9, and New York at 7:30 a. m., June 10. God's time is figured—not daylight saving time. The railroad fare will be, for the round trip from Fort Worth, $75.50, with a lower berth, one way, $12.35. These roads have promised to furnish the best possible service in every way. We appreciate that it is difficult to get doctors to concentrate on a trip at any particular day or hour, but there are only two or three days available for this trip, and first and last there should be Texas doctors on the train mentioned on each of these days.

Let us remind our readers that a member of the State Medical Association, is *per se* a member of the American Medical Association. However, only Fellows may register at the annual session of the American Medical Association. A member may become a Fellow by simply proving that he is a member, and paying the Fellowship fee, $8.00, which fee, incidentally, includes subscription to *The Journal of the American Medical Association* (or any other American Medical Association publication within that amount). While it is best to apply for Fellowship well in advance, a member can accomplish Fellowship at the meeting by presenting his State Association membership card, proving his identity and paying the fee.

Last Minute Dues.—We would finally admonish our readers that they can still pay dues if they will hurry, and with no interruption in membership. As we have before explained, county society annual reports are kept open until they can all be closed at the same time. Because of the clerical work involved, it is hardly ever possible to finally close these reports until just before leaving for the place of the annual session. That means that if a member who has not so far paid, will now pay his dues to the county society secretary, the county society secretary can get them to the State Secretary perhaps in time. This may become important for other reasons than registering at the annual session. There is medical defense, and a number of other factors to be considered. A definite interruption of membership may be embarrassing. There will be no interruption in membership if the member is shown on the report of the county society secretary. There will be an interruption in membership if this is not done, and the interruption cannot be cured. Membership may be renewed, but the interval in membership which would obtain, is a fixture.

No one can register at the annual session except his name is on the annual report, and no one's name will be on that annual report except his dues have been received in the office of the State Secretary. Neither can anyone pay dues at the place of registration, except he has written permission of his county society secretary. This is the law, and neither the State Secretary nor any other official of the State Association can change it.

A Library Committee has been appointed by the President. The duty of this committee will be to procure endowments for the State Medical Association Library. The Committee comprises the following membership: Dr. Sam E. Thompson, Kerrville, Chairman; Drs. E. W. Bertner, Houston; Ralph Homan, El Paso; Julius T. Krueger, Lubbock, and J. M. Travis, Jacksonville. The selection of this, the first committee set up for this purpose, appears to have been well made, indeed.

It will be recalled that the Trustees of the State Medical Association have long been pleading for endowments for our Library. No report of the Board of Trustees now for several years has failed to discuss the matter, and there have been several editorial references thereto in the JOURNAL. Our General Attorney has prepared a form to be used by those who would endow the Library. Not a single endowment has been received, except the splendid promise of Dr. Sam E. Thompson of Kerrville, to bequeath a sizable amount to the Library.

In an effort to determine why such a worthy movement should not be supported by at least doctors who have money to give away, has led to the conclusion that people with money which they must leave behind when they pass out of the human picture, wish to leave it to firmly fixed organizations devoted to the purpose which appeals to them, and which have no other interests, such as would divert their money to uses in which they may not have had an interest. People with money—usually not doctors, make it a business to find out about these things. Quite possible in considering our Library as a recipient for endowment, it has been concluded that the State Medical Association of Texas, which owns the Library, a chartered organization, might find it more convenient to use the money so donated for

something else rather than Library purposes. That would, of course, defeat the aims and ends of those who would endow the Library. We believe it would not happen, but we are not making the donations. There may be other reasons, but these seem to be enough.

So, in all probability the Board of Trustees of the State Medical Association of Texas will shortly perfect an organization for the sole and exclusive purpose of maintaining a medical library in the State of Texas, for the benefit of all reputable doctors in the State, and its laymen who are properly interested in medical and public health matters. It is intended that this organization shall be legally set up, and that it be obliged to carry out the terms of any endowment which it accepts. It is believed that such an organization can be perfected with the assurance that it will remain under the control of the State Medical Association, the only factor entering the problem which will be relinquished will be the right of our Board of Trustees to spend the money accumulated for the purpose under other than the terms of the donations involved.

The Trustees have long since offered to perpetuate any endowment received in any name selected by the donor. Should the donor desire that the money be spent as it is needed, that will be done. Should he desire that only the interest on the money be spent, that will be done.

We are sure that the report of the Board of Trustees each year, covering the activities of the Library, have been read. If so, there will be in the readers' minds ample justification for the endowment of such an institution. Without referring specifically and in detail to the figures and the activities of the Library, let us say that the Library has been doing splendid work, at a reasonable but considerable expense. No reputable physician in the State is denied access to the Library. No physician in the State need now treat a case which presents features which he does not understand. If there is in existence any literature which will clarify the same, in all probability that literature is in the Library, and available to any such physician. If this does not mean a lot to the public welfare, we are badly mistaken in our judgment.

A New Arrangement of the Physicians' Directory of the advertising pages of the JOURNAL has been made in this number. We would like to call the attention of our readers not only to the fact of the change, but to the importance of the "Physicians' Directory."

For some time it has been appreciated that the divisions of the Physicians' Directory were becoming obsolete, or at least inapplicable. The development of the specialties in medicine has been rather rapid, and in such varying directions that it has been difficult to keep up with them in this respect. So, as a beginning, the department of "Skin, Genito-Urinary and Rectum," has been broken into three parts, namely, "Dermatology," "Urology," and "Gastro-Enterology and Proctology." Each department starts off with a fairly good patronage, there being eleven cards under Dermatology; nine cards under Urology; eight cards under Gastro-Enterology and Proctology. It is expected that there will be additions to each, as soon as it becomes generally known that the rearrangement has been made. The combination of gastro-enterology with proctology has been made because those two groups are still working together in an organization of their own, and because thus far there seems to be not enough patronage from either group to warrant any further split.

As to the usefulness of the professional card section of our advertising pages, let us simply observe that this is one of the few opportunities the ethical physician has for advertising his services. There is no violation of medical ethics in the procedure for the reason that the JOURNAL goes only to physicians. The service is, as a matter of course, both to the advertiser and to the physician he addresses through his ad. People are constantly moving about over the State. When they change their residence, they very naturally want to contact a physician of one classification or another, perhaps several. They usually ask their family physician for recommendations. That is where the cards in question come in handy. All the family physician needs to do when such an inquiry is made of him, if he has no personal acquaintance among the physicians to be considered, is to turn to the Physicians' Directory of the JOURNAL. Nobody guarantees that a physician carrying a card in the JOURNAL will be other than an ethical and presumably competent physician. Those are important factors. A physician who has a patient who is removing to another section of the State, particularly to a city, is negligent of his obligation to his patient if he does not warn him against quacks and incompetents, which are unfortunately always with us, one place or another. Such a warning will usually bring forth an inquiry as to the proper physician to contact.

The cost of this service is nominal. A single referred case will pay for quite a number of insertions. There is a profit involved, but, even so, the department is maintained as a service.

BONE DISEASE IN CHILDREN: RADIOLOGIC FEATURES*

JESSE B. JOHNSON, M. D., F. A. C. R.
AND
H. M. ANSPACH, M. D.
GALVESTON, TEXAS

Plastic surgery on bones is undoubtedly primarily the concern of the orthopedic surgeon, but the roentgenologist plays an important role in following the patient postoperatively, as well as preoperatively.

Bone lengthening and shortening procedures comprise one important group, both aiming at the equalization of the extremities and the production thereby of better function and stability.

The operative lengthening of the bones of the lower extremity was apparently first reported by Codivilla in 1905. His procedure consisted of an osteotomy followed by skeletal traction by means of a nail through the os calcis. Putti in 1921 was the first to use traction and countertraction directly on the bone being lengthened and emphasized the need of gradual and continuous traction. His technique was similar to that used today. An osteotomy was performed, a pin was placed through each fragment, and the pins were connected by telescoping tubes fitted with springs and a screw device by which the tubes could be lengthened, thus forcing the pins apart. No provision was made for maintaining the fragments in close apposition, however, which may be the cause for the delayed union which he noted in all of his cases.

Abbot[1] in 1927 perfected the technique which is essentially that used in most cases today. The tendo achilles is lengthened by the Hoke method, and an oblique osteotomy of the fibula is done, followed by a Z-shaped osteotomy of the tibia. Pins are placed through each fragment and the pins connected by some form of lengthening device similar to that used by Putti. In addition, some form of a stabilizing apparatus is used to insure good alignment in the lateral plane, and good apposition of the fragments. Seven to ten days following operation, the lengthening is begun and progresses on an average of one-sixteenth to one-eighth of an inch per day until the desired length is obtained. Femoral lengthening is done in a similar manner. The tibia has been lengthened two and three-fourths inches, and the femur three and one-fourth inches.[2]

CASE REPORTS

CASE 1.—The patient showed on x-ray examination, a shortening of the right leg of about 4 cm., the femur as well as the tibia being involved. The plates were made at six feet. The first examination after operation showed the fragments to be in good alignment, with a separation of about 2.5 cm. The osteotomies of the bones are well shown, as is the extension apparatus and the method of stabilization, which was by means of two pins in each fragment. Two months later, the apparatus is still in position; the bones show very good position and alignment, with considerable callus formation. The lengthening at this time is about 6 cm., and the leg appears to be slightly longer than the normal. Examination almost one year after the operation shows good bony union of the tibia and the fibula in very good position and alignment.

Shortening operations have not been as well standardized as the lengthening. Four types are done at the John Sealy Hospital, Galveston, all on the femur. They do not require such complicated apparatus as the lengthening operations, and for that reason can be adequately discussed from representative cases.

CASE 2.—Shortening in this case was secured by a z-shaped osteotomy with removal of as much bone as necessary and the ends morticed together. The fragments were then fixed in position by wires and the leg put up in a cast. An excellent result was obtained. The fragments are in good position and alignment, with liberal callus formation. Such is not always the case, however, as occasionally the wires either slip or become broken, resulting in separation of fragments and malformation. Pins or screws may be used in place of wires.

CASE 3.—This patient had an infantile coxa-vara of the left hip, with about three and one-fourth inches shortening of the left leg. A transverse osteotomy was done on the right femur, following which a three-inch segment of bone was removed from the medial half of the lower fragment. The lateral portion was then overlapped on the upper fragment and secured with screws. The result has been very satisfactory to date. There is good position and alignment of the fragments, with good callus formation, and enough shortening has been obtained to equalize the extremities. This appears to be a very satisfactory type of procedure.

CASE 4.—Shortening has been obtained in this case by a transverse osteotomy with overlapping of the fragments and fixation by means of two wires driven in obliquely downward from the side. This appears to be a stisfactory type of procedure, especially in younger individuals. The end result shows good bony union with good functional alignment.

CASE 5.—A morticing type of osteotomy was done as in Case 1, securing the desired amount of shortening. Two wire pins were put in for fixation of the fragments, but these were insufficient to hold the fragments in position against the expansile force of the thigh muscles, and pulled free from the upper fragment, allowing wide separation and loss of shortening. This type of fixation seems to be inadequate with this type osteotomy, especially in older patients, or where a large amount of shortening is secured.

CASE 6.—An osteotomy was done as in Case 3, but instead of fixation with screws, two Kirschner wires were drawn through the fragments from the side. The pins failed to hold, however, and pulled out of the inner fragment, allowing some separation of the fragments in the anteroposterior plane, though the shortening was maintained. The pins were subsequently removed. A roentgenogram

*Read before the Section on Radiology and Pbysiotherapy, State Medical Association of Texas, San Antonio, May 9, 1939.

shows the fragments to be in good position and alignment, with fair amount of callus formation. The amount of shortening obtained is very adequate, as compared to the other leg. The end result shows good bony union with the fragments in good functional alignment, but some anterior and lateral bowing.

Slipping of the upper femoral epiphysis is not an uncommon finding, four instances having been seen in our department within the last year. The *x*-ray findings are characteristic and the diagnosis is easily made in most cases, especially with the aid of a lateral view of the hips, which often shows even a greater deformity than is seen on the anteroposterior plate. We have not been fortunate enough to see any cases in the preslipping stage, at which time there is no demonstrable deformity, but the epiphyseal line appears widened, with an irregular fuzzy appearance on the diaphyseal side, and a very well defined and demarcated appearance on the epiphyseal side. In the post-slipping stage, the epiphyseal line presents the same appearance, and the characteristic deformity is found in addition. The head slips medially and posteriorly and has the appearance of a cap which has slipped off the rounded end of the neck. The anterior margin of the head presents a crescentic area of apparently increased density, which is probably due to the fact that the epiphysis, having rotated, is seen edgewise instead of laterally. The lateral margin of the neck appears to be further lateral than the corresponding margin of the head.

Case 7.—This patient had been having symptoms for three weeks. *X*-ray examination showed all the cardinal findings of slipped epiphysis: broad metaphysis with wooly diaphyseal border and sharp epiphyseal; the head slipped medially and posterially; crescentic anterior margin of the head, with apparent increase in density; obliteration of the usual angle between lateral margins of the head and neck.

Case 8.—The patient had been having symptoms about two months when seen. *X*-ray examination showed considerably more deformity than in Case 7, but again all the cardinal findings were present. In addition, there was quite considerable disuse atrophy of all the bones present, indicating a lesion of longer duration. In addition this patient showed some narrowing of the joint space and roughening of the bone ends. It is impossible to determine if this is a result of the slipped epiphysis, or whether a low grade infectious arthritis existed previously, and if so, whether this had any part in the production of slipping, as postulated by some authors. Following open reduction with resection of part of the neck, and realignment of the head and neck, the appearance is quite good. The position and alignment is good, with the head in apparently normal position in relationshhip to the neck and acetabulum. Considerable resorption of the neck is apparent. The end result shows bony union with the head in good position; some shortening of the neck, and some new bone formation in the joint line, especially the upper margin. The joint space is greatly narrowed with irregularity underlying bone.

Case 9.—The patient came in complaining of a limp and shortening of the right leg, dating back five years. The *x*-ray examination did not show anything very unusual in the anteroposterior view, but the lateral view showed marked rotation of the head posteriorly. The bone density was good, and the epiphyseal line appeared normal. A diagnosis of old, healed slipped epiphysis was made, the slipping apparently being of a minor degree. The patient was operated on, and a wedge osteotomy done in the femoral neck in an attempt to correct the deformity and provide a better weight-bearing surface.

Case 10.—The patient came for traumatic fracture of the right femoral neck. A roentgenogram revealed fracture of the neck of the femur and, in addition, considerable deformity of both femoral heads. The heads of both femoræ had apparently rotated medially and posteriorly. The anterior margins of the heads formed crescentic-appearing shadows. The posterior margins appeared as faint rounded shadows below the neck on each side. The joint spaces were narrowed, and the bony cortex roughened. Due to the rotation of the heads, there was an apparent coxa-vara deformity on both sides. The appearance was that of an old slipped epiphysis.

A surgical fracture of the neck of the left femur was done, and examination now shows the head rotated upward as compared to the previous examination, to correct the coxa-vara—and give a better weight bearing surface. The joint space is practically obliterated.

Case 11.—The patient had been coming in for several years for pain and limitation of motion in the right hip. There was no history of severe injury to the hip. *X*-ray examination showed a marked coxa-vara deformity of the hip, with the head grossly broadened and flattened. There was very marked hypertrophic changes about both the head and acetabulum and deformity of both. The joint space was very narrow but still present. In view of the past history, together with the *x*-ray findings, this was considered to be an old neglected slipped epiphysis with marked secondary arthritic changes. Nothing can be done to correct such a hip. A subtrochanteric osteotomy may be done to correct the weight-bearing angle.

Congenital dislocations of the hip present another large group of cases. Three types of orthopedic procedures are usually employed on them: closed or bloodless reduction; open reduction in which the head is placed in the acetabulum, with or without a shelf being turned down over it; and open reduction in which the head cannot be placed in the acetabulum, but is displaced onto the anterior surface of the ilium and either a new socket gouged out of the ilium and completed with a shelf, or a shelf alone used. The shelf may be turned down from the outer table of the ilium, or tibial pegs used, the former probably being the better. The reductions seen in the John Sealy Hospital have been chiefly of types 1 and 3.

Case 12.—*X*-ray examination in this case showed the head of the femur to be anteverted, displaced somewhat superiorly, and separated from the acetabulum by a considerable distance. The acetabulum itself appeared to be fairly adequate, although the roof was quite sloping. An open reduction was performed, and the head of the femur placed in the

acetabulum where it appeared to be in fair position, although projecting beyond the socket by about one-fourth its diameter.

CASE 13.—*X*-ray examination in this case showed the femoral head to be a considerable distance above the acetabulum. The head itself was small and the neck almost vertical. The acetabulum was shallow and ill developed. From the *x*-ray appearance, the hip would seem to be less favorable for reduction than in case 12. Closed reduction was done, and the head placed in the acetabulum. *X*-ray examination showed it in fair position, but the head appeared to be flattened, and it almost had the appearance of Perthe's disease, probably due to too much pressure.

CASE 14.—The hip in this case had the characteristic appearance of congenital dislocation, with the head high on the ilium. Traction failed to pull the head down to any great extent, so open operation was resorted to, the head displaced anteriorly, and a shelf turned down, using the outer table of the ilium. The bony fragments can be seen forming a shelf over the head.

Tuberculosis of the joints, especially the hip, always has, and probably always will be a serious problem. The best that can be hoped for is a bony ankylosis of the joint, but, unfortunately, this does not always occur. In these cases, various types of fusion operations have been done, which may be roughly classified as intra-articular, extra-articular, and a combination of both. The extra-articular fusion is the one presented here, and has shown some good results.

CASE 15.—This patient showed complete destruction of the femoral head and neck, with considerable destruction of the acetabulum and surrounding bone. The greater trochanter was displaced upward. There was no evidence at the time of active disease, and there has been fairly good re-deposit of lime salts in the affected areas. The patient was operated on and the greater trochanter and ilium exposed and freed of all fibrous tissue, cartilage and so forth. A groove was made in the ilium and femur, in which was placed a large tibial graft. Two additional grafts were placed between the ilium and femur and the interspaces were filled with bone chips. *X*-ray examination six months later showed two large bone grafts extending from high on the ilium down to the greater trochanter and shaft of the femur, with multiple small grafts in between. All the grafts appear to be healthy, and there is good bony union.

CASE 16.—Grafting was done very similar to that in Case 15. There appeared to be resorption of the graft toward its lower third, but good new bone formation around this area.

Epiphyseal resections may be done for a variety of reasons, but one of the more important is to prevent further growth of the extremity, in cases in which inequality of length already exists. Resection of the epiphyseal line is apparently not quite as simple as it would seem, for frequently the *x*-rays show good sized islands of cartilage remaining, sometimes sufficient to cause deformity by further growth.

CASE 17.—The patient had a congenital dislocation of one hip with a resultant shortening of that leg. An epiphyseal resection of the lower femoral epiphysis was done on the opposite leg to prevent further disparity in length. *X*-ray examination shows complete resection of the epiphyseal line with good bony fusion. Some irregular bone production is present around the site of the former line.†

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2201 Avenue D.

BONE DISEASE IN CHILDREN: ORTHOPEDIC FEATURES*

G. W. N. EGGERS
GALVESTON, TEXAS

Foreword.—The various conditions presented cover so many clinical phases that only the details of the slipping of the femoral capital epiphysis and surgical shortening of the femur are discussed.

I. EPIPHYSIOLYSIS OF THE FEMORAL HEAD

The first reported case of traumatic separation of the head of the femur was reported by Brousseau in 1867. Since that time the condition has been noted, particularly in the advanced stages. As the *x*-ray study of bony structures has progressed, this subject has been thoroughly studied until now the clinical course of the condition is rather clearly understood. Recognition in the advanced stage is comparatively simple, in the early stage difficult and most important.

The age of incidence is usually the thirteenth or fourteenth years for boys, eleven and twelve for girls. This is slightly later than the age incidence of tuberculosis, from which it must be differentiated. The frequency of the condition at the above ages has placed the condition, therefore, in the adolescent period. The etiology of the condition is apparently definitely unknown. It is not considered infective but is probably an osteochondritis associated with or without trauma. Most of these patients are in two physically different groups, the slender type and the heavy type. The second group suggests the possible etiology as an endocrine disorder. The slender type has fostered a rachitic or metabolic possibility as the etiologic factor. Frank trauma alone as the cause is questionable, even though it may be the inciting factor. Usually the stress is exerted on an already weakened epiphysis. This is probably true because the violent act may be merely arising from a window seat, which marked the onset in one of our cases. Static forces

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*From the Department of Surgery, Orthopedic Section, University of Texas, School of Medicine, Galveston.

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of weight-bearing, perhaps, play a part but are apparently of no great importance.

The condition of the epiphysis during the period of active growth is important. The epiphysis is adjacent to the rapidly growing diaphysis. If the bone of the diaphysis adjacent to the epiphyseal line is studied as to consistency, it is found to be quite soft and extremely vascular to permit rapid growth. The base of the epiphysis, in contrast, has a very firm hard layer of bone not easily penetrated by an instrument. With two such surfaces separated by the epiphyseal cartilage it is quite easily understood how the slightest variation of soft structure of the diaphysis will allow the firm epiphysis to become displaced, restricted only by the periosteal attachments which it bears.

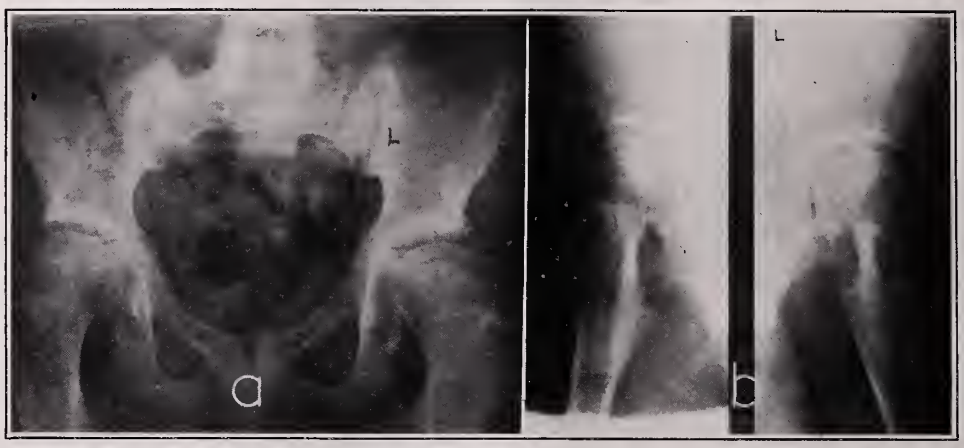

FIG. 1. *a*. Roentgenogram showing bilateral moderate slipping of the left femoral head, and early fusion of the right. *b*. Same as 1. *a*.—lateral views; note the rotation.

There is ample evidence that in addition to the so-called metabolic types previously mentioned, there are cases in which the history is of violent trauma. These are usually unilateral in contrast to the other types which may be unilateral or bilateral. The severe trauma group is necessarily very small.

The clinical history of these cases is usually non traumatic and traumatic. In the non traumatic the onset is usually insidious. There is pain, mild perhaps, in the hip or radiating to the thigh and knee. The location of referred knee pain is important, usually being proximal to the patella on the anterior surface. The referred pain may even extend to the foot. As a rule the pain is not severe, not constant and is accompanied by a limp. There are intervals of improvement, and the pain is always relieved by rest. As a rule it is the limp which the parents note, for it persists even though the pain is relieved. As the condition progresses the affected extremity becomes smaller and perhaps even shorter. The involvement may be bilateral.

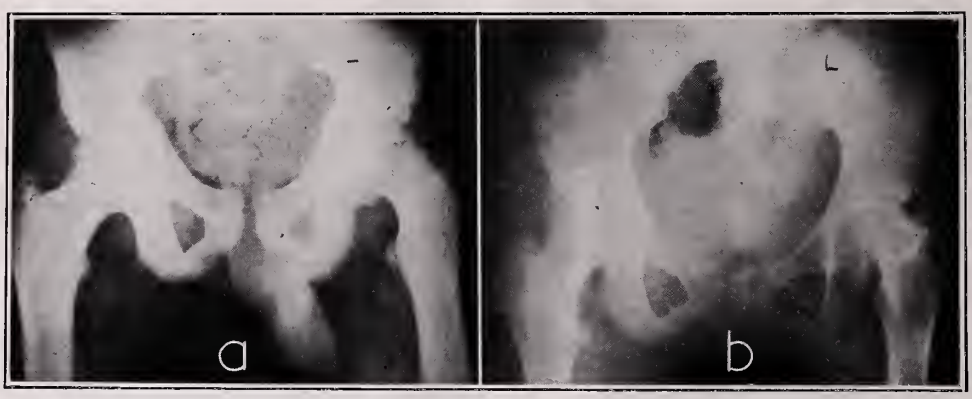

FIG. 2. *a*. Roentgenogram showing early slipping of left femoral head. *b*. Moderate epiphysiolysis.

In the traumatic type the symptoms of pain and limp follow trauma. The patient may receive a fall, blow or make an awkward move after which follows the pain. Often

the history will disclose previous pain. The severity of the symptoms varies from mild pain, limp, to severe pain and inability to use the leg. The extreme traumatic case is where the violence was sufficient to cause even fracture. All gradations exist between this

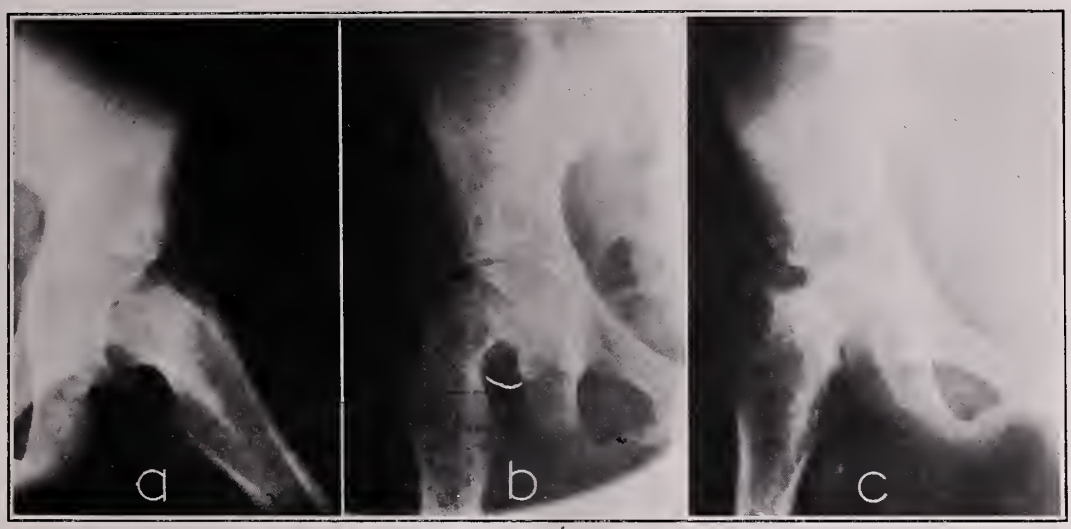

FIG. 3. *a.* Roentgenogram showing epiphyseal line changes. *b.* Advance rotations. *c.* Showing surgical fusion and thinning of the articular space.

type and the non traumatic gradual symptomatology.

When the epiphysis starts slipping pathologically it progresses from a mild early slipping deformity to a later completely displaced head. The treatment of the various stages is so definitely known that to secure

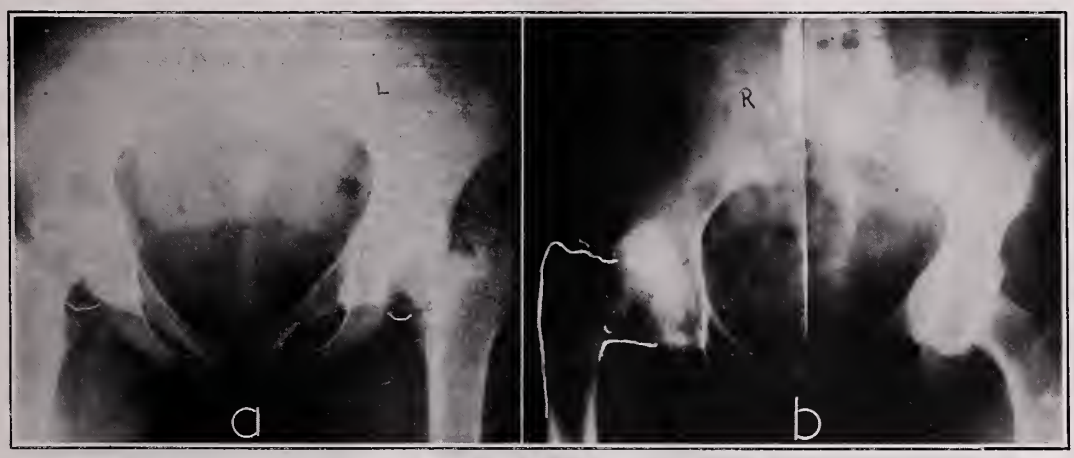

FIG. 4. *a.* Roentgenogram of a case of bilateral slipping of the femoral head with fracture of the neck of the left femur. *b.* Epiphysiolysis of twenty years duration. Note the endeavor to create a physiological shelf, on the right.

the most satisfactory results it is necessary to prevent progressive slipping by ossification of the epiphyseal plate early. The clinical findings at the early stage then must be recognized and the roentgenogram correctly interpreted. What are the early physical findings? They are slight limitation of internal rotation and abduction, particularly demonstrable by comparing the opposite side or bilateral if such exists. It may or may not be accompanied by a limp, but there is some pain or a history of pain as previously described.

The *x*-ray appearance at this stage shows a loss of the bulge the normal head shows with the upper margin of the neck. The neck as a result seems to be more prominent laterally. The epiphyseal plate is lighter in appearance. The lateral plates are important and show the head beginning its early migration posteriorly and downward. This is sometimes incorrectly called the "preslipping stage"; it is truly the early slipping stage.

The stage when the epiphysis has slipped then brings about apparent clinical and *x*-ray findings which are more familiar. There is pain in the hip and referred leg pain. Ab-

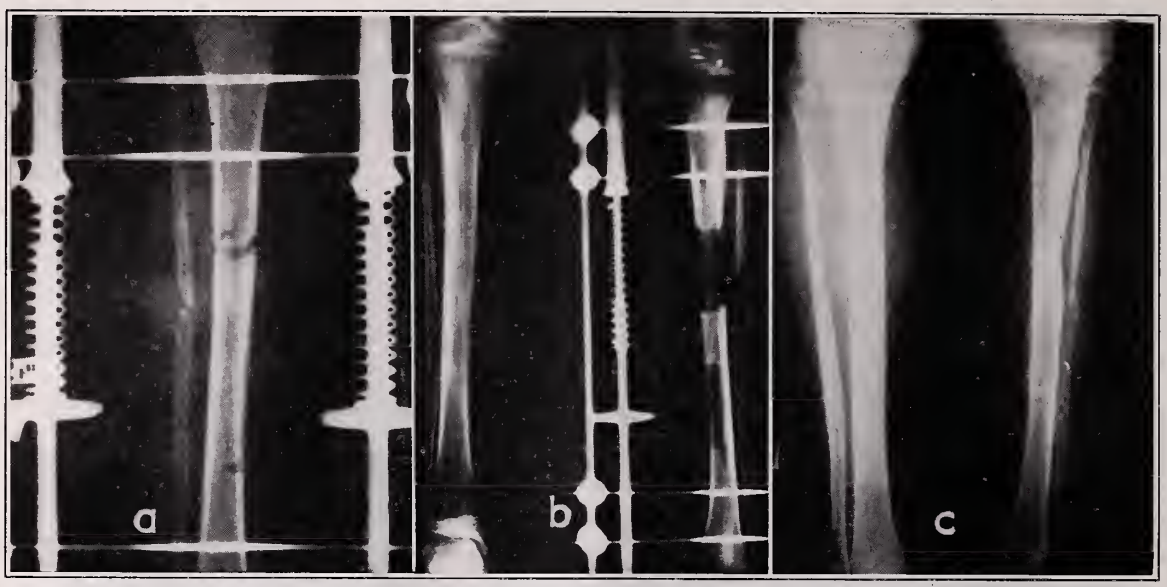

FIG. 5. Roentgenograms showing results attained in bone lengthening operative procedure: (*a*) postoperative; (*b*) maximum correction and the normal tibia for length comparison; (*c*) both tibia at the end of two years, the right being the bone lengthened.

duction and internal rotation are markedly limited and there is some shortening. The foot becomes everted and the hip flexion is also impaired. Muscular spasm is present.

The *x*-ray findings at this stage show the head is now posterior and downward, the neck is anterior, lateral and upward displaced, and the patient is walking with the head rather edgewise in the acetabulum. The ligamentum teres is intact. The coxa vara is now quite apparent.

Follows the third stage in which the symptoms are the same except that the pain has subsided to a great extent. This is due to the union of the head in the abnormal position. The physical findings are the same.

The quiescent stage is considered when the *x*-ray shows union of the head to be complete. The abnormal position is retained and the restrictions of motion present. These hips, however, apparently will give some pain indefinitely and herein lies the importance of early diagnosis and treatment. One patient had painful hips for twenty years and continues to be disabled.

As, in so many conditions, the treatment and satisfactory results depend on early diagnosis and treatment, and it is again empha-

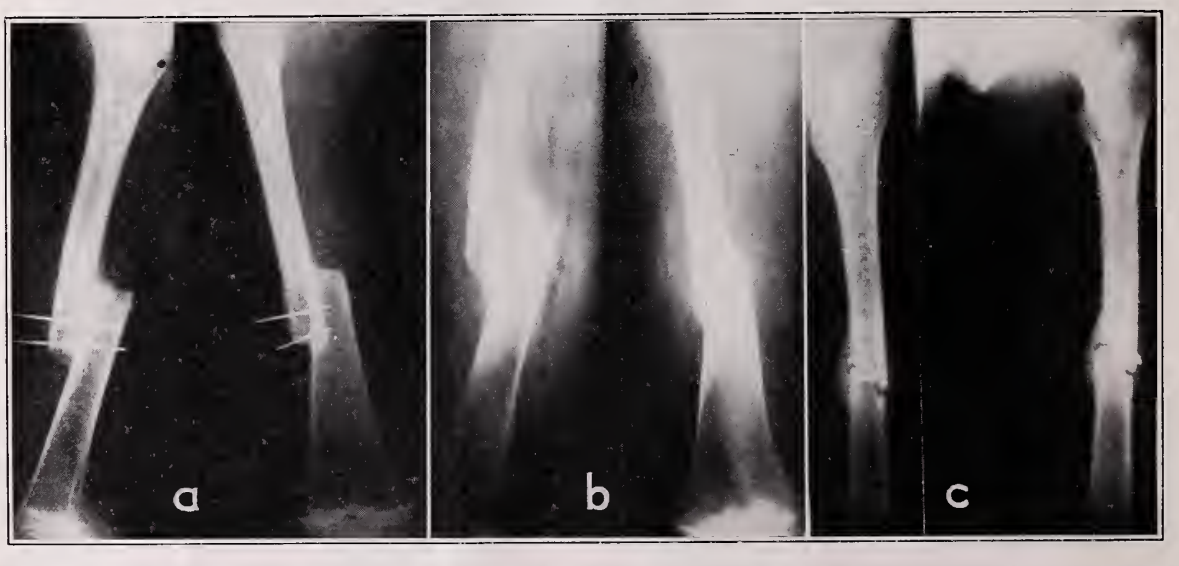

FIG. 6. Roentgenograms showing methods of shortening bones: (*a*) a transverse osteotomy has been done with overlapping and retention by removable Kirschner wires; (*b*) one year after operation. This method is used in patients of 10 years of age and under. (*c*) Roentgenogram of shortening procedure used in older patients. The ends are morticed and secured by metal fixation with a pin screw or wire. It is thought this procedure gives greater stability.

sized that the early slipping stage is the time to recognize this disability.

The treatment varies depending on when the epiphyseal slipping is recognized. The early stages can be successfully cared for by several methods: (1) drilling multiple holes through the hard epiphyseal base; (2) fixation by metal nails (Smith Peterson) or screws; (3) impaction to cause epiphyseal fusion. All of these methods are to cause epiphyseal fusion for unless this takes place, the possibility of progress is likely. Immobilization in plaster spica for twelve weeks is necessary for the epiphyseal fusion.

The treatment after the head has displaced depends upon the age of the slipping. If the displacement is early it may be reduced by the Ledbetter maneuver as used in fractures of the neck of the femur. If successful, nailing and fixation can be done with cast immobilization. However, if the reduction is not accomplished by the closed method, the epiphysis is displaced surgically and replaced on the neck. I have found it necessary to remove part of the neck usually and in so doing place the head in a slight valgus position for weight-bearing. Plaster is applied with the knee flexed forty-five degrees and the femur in marked medial rotation. This procedure may show excellent *x*-ray reposition but certain hips have variable amounts of stiffness; occasionally one may ankylose and there is certain residual restriction of motion. Slight shortening results, not due to the operative procedure but to the fusion which is necessary for improved function.

During the last stages of the condition one must decide what is best. If the union of the head with the neck is extremely bad and there is much callus, or if the head shows atrophy due to loss of functional use and is in a very distorted position, operative replacement may be quite impossible or so damaging that a satisfactory result is not likely. In this case a subtrochanteric osteotomy to improve the coxa vara and make the joint more serviceable from a weight-bearing standpoint is useful. The osteotomy is done just above the lesser trochanter and obliquely from below upward, so that the femur displaces medially to support the distorted head and neck. Cast immobilization is again used.

The rather poor result obtained in treating slipped epiphysis is due to the failure of early recognition. All the corrective work done improves but does not restore the hip joint to its normal physiological function. The only hope of saving the patient permanent impairment is recognition in the early slipping stage. This can be done by the attending physician suspecting the condition in prolonged indefinite hip pain with adduction and internal rotation impairment, and *x*-ray examination which shows the loss of the lateral bulge of the head and the slight posterior displacement of the epiphysis in the lateral view. Treatment in the early

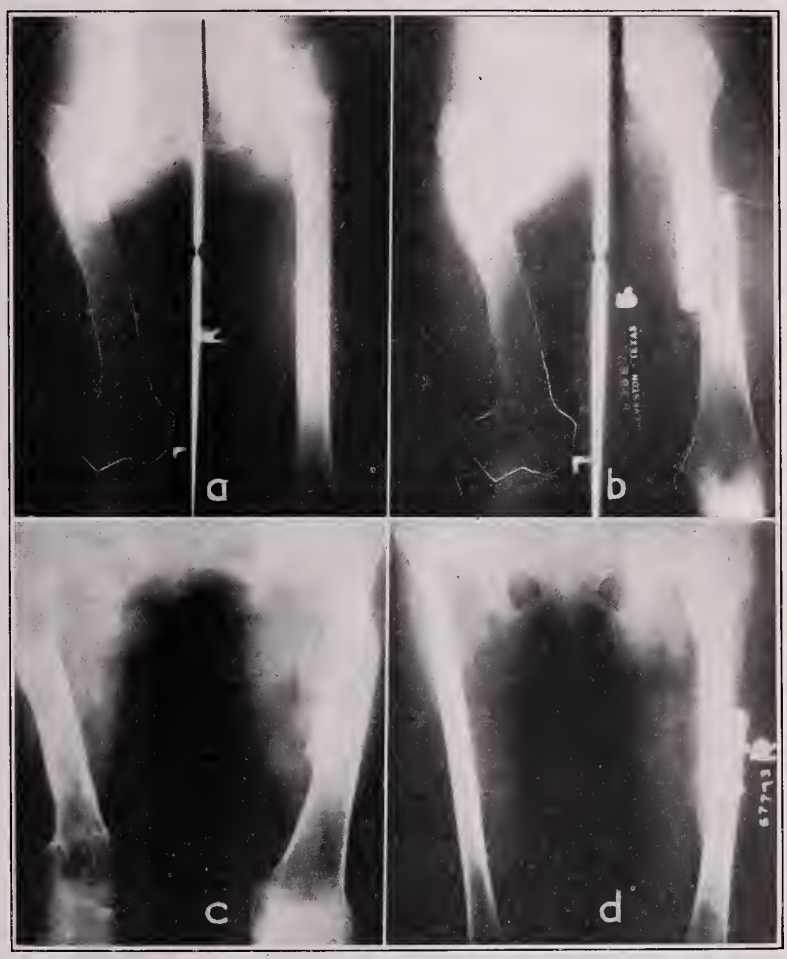

FIG. 7. Roentgenograms showing a third method of bone shortening: (*a*) right, a normal femur; left, a femur five and one-half inches shorter; (*b*) same case, note that the right normal femur has been shortened by overlapping; a slight longitudinal separation resulted, but as will be noted in (*c*) made ten months postoperative, union was not prevented and four and one-half inches shortening was secured. However, the desired security was not obtained, and to overcome the insecurity, vitalium screws have been used as the retaining material, which gives the most stability in cases of extensive shortening as shown in (*d*).

stages is successful if epiphyseal fusion is surgically accomplished. Simple immobilization in a cast will not prevent progress of the condition.

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II. OPERATIVE SHORTENING OF THE FEMUR

The variation in the length of extremities has always been a subject of concern to the profession. The use of raised shoes, apparatus of various types dates to centuries ago. In comparatively recent times, the progress of surgery and the physiological understanding of bone growth has encouraged means of restoring extremity symmetry. The bone lengthening procedures have usually dealt with the tibia because of its accessibility, although the femur has also been so treated. The converse has also been used in that the longer extremity has been frequently shortened.

That bone lengthening can secure results is shown by the one set of roentgenograms (Fig. 5*a*, *b*, *c*). This procedure is quite formidable and quite painful to the patients. It does have its virtues, but no attempt will be made to discuss the bone lengthening procedures. The restoration of leg symmetry by shortening of the femur on the sound side will be the subject considered.

The shortening of a good leg brings to our minds several important questions. First, is it good judgment to do such an operative procedure, and what should be the basis for such correction? When a person has a good functioning leg and a poor one it requires rather definite indications to operate on the sound member. It is not desirable to shorten the femur surgically unless the leg length difference is such that the crippling deformity is quite obvious, not relieved by raising the shoe and a slight pelvic tilt. How is that determined? We have accepted as a necessary standard that there must be three or more inches in difference between the leg lengths to warrant the shortening operation, and this variation must be in the femur or hip joint.

The next important fact is the etiology of the shortening in the affected femur. This is usually in the hip joint. Variations there are due to unilateral, irreducible, congenitally dislocated hips, disease destroying the head and neck of femur, ankylosing infections, and a few rare traumatic affections. The shaft of the femur may be decreased in length due to old osteomyelitis or anterior poliomyelitis in which loss of bone or growth has caused shortening. There may be epiphyseal involvement of the distal epiphysis as in the scurvy of babyhood causing early fusion of that growth center. There are other causes but those named are responsible for most of the affected legs.

Another basic factor in correction is that the affected leg must be at its maximum of efficiency; that is, flexion and adduction deformities must be corrected, poorly functioning and painful hips fused or corrected, and any osteomyelitis must be inactive for about two years.

A third condition for consideration is the result of growth in active epiphyses. If one is destroyed in the affected leg, then arresting an epiphysis in the sound leg may be necessary, for if this is not done some length variation will recur. Therefore, to shorten the femur successfully one must accomplish it by shortening and then maintaining the shortening as nearly as possible by epiphyseal arrest, done usually on the distal epiphysis of the femur of the sound leg or the tibia and fibula.

The technical methods of shortening are determined by the age of the patient. In patients of 10 years or under, a mere transverse osteotomy, overlapping and retaining by removable Kirschner wires is sufficient. This is shown in figure 6*a* and *b*. It is satisfactory in young persons.

In older patients it was thought that greater stability could be secured by morticing the ends and securing them by metal fixation with a pin screw or wire. This is satisfactory, especially in slender individuals. This method is shown in figure 6*c*.

In older persons an extensive bony contact and stability was considered necessary. This was deemed necessary because it was found wires were no guarantee against muscular activity, especially the adductors, which tended to separate the overlapping of the bones. Such security is necessary because when the bones are shortened, it is found they will overlap or shorten an inch or two, but to secure greater shortening the bones must be pushed forcefully to overcome the tremendous bulging of the muscles which increases the diameter of the leg very markedly and tends to push the distal fragment from the proximal one.

Therefore, a third method of overlapping was used as in figure 7*a*. In this case the shortening was four and one-half inches. In figure 7*b* the removable wire method was

used, and a slight longitudinal separation resulted which, as the other plates show, did not prevent union (Fig. 7*c*), but does not give the desired security. To overcome this, it was decided to use vitallium screws as retaining material. Consequently, for extensive shortening this method has been adopted as the most secure, and is shown in figure 7*d*. Also, patients are comfortable because there is no possible motion in the fragments.

The technique of the operation is as follows: After twenty-four hour preparations of soap, a tourniquet is applied. The area selected is the mid portion of the femur because it preserves the blood supply to both fragments. The usual lateral incision is used and nondigital wound technique followed.

The amount of bone to be removed is accurately measured and marked on the bone (Fig. 8*a*). Two lateral holes are drilled to receive the screws later (Fig. 8*b*). Two large vertical holes are drilled at the marks (Fig. 8*c*), and the femur is cut between them with a cross cut saw (Fig. 8*d*.) Then two transverse cuts are made, half way through the medial portion at the distal vertical drill hole (Fig. 8*e*), the second one completely across the femur at the proximal drill hole

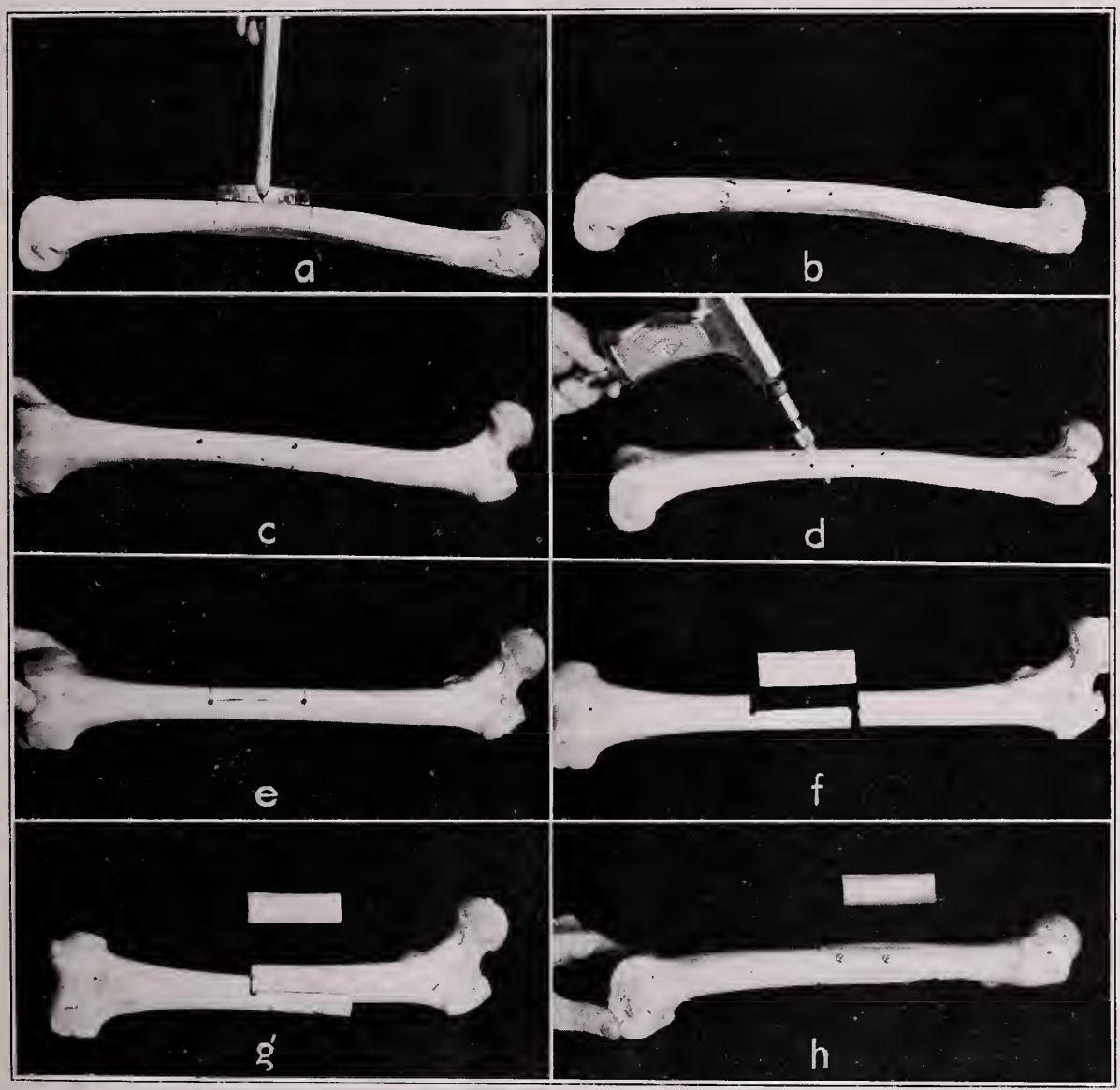

FIG. 8. Showing steps of operative procedure used in bone shortening: (*a*) a special ruler is placed in the wound and the amount of bone to be removed is accurately measured and marked on the bone; (*b*) two lateral holes are drilled to receive the screws later; (*c*) two large vertical holes are drilled as shown; (*d*) the femur is cut between the vertical holes with a cross cut saw; (*e*) two transverse cuts are then made, half-way through the medial portion at the distal vertical drill hole, (*f*) the second one completely across the femur at the proximal hole; (*g* and *h*) two screws are then securely placed, retaining the fragments in the desired shortening.

(Fig. 8*f*). The loose fragment is removed subperiosteally. The bones are then overlapped, and small drill holes made through the previously prepared drill holes. Two screws are then securely placed, retaining the fragments in desired shortening (Fig. 8*g* and *h*). The distal fragment tends to slip posteriorly and can be easily corrected by slight knee flexion. The fascia is closed with catgut sutures, the skin with silk, and a spica including the pelvis and entire leg is used. Union is secured in about eight weeks.

This method gives a sense of security to the operator and insures the patient the maximum comfort and desired shortening. It is, we believe, a satisfactory secure method of shortening the femur and can be done in a comparatively short operative time.

In regard to shortening of the muscles, this is accomplished by the time the cast is removed, and no instances of knee instability have resulted. We attempt to assist the muscular changes by having the patient taught thigh muscles exercises before operation and they are then instructed to do the same exercises after operation. These exercises consist of contracting the extensors and hamstrings. Physiological shortening has always been satisfactory. The gait is improved in that the limp is reduced, and the level of knee flexion is identical on both sides. The posture is a bit "squatty" or "duck legged" but it is not as apparent as one would think.

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ABSTRACT OF DISCUSSION*

Dr. Davis Spangler, Dallas: Since in this symposium the radiologist is discussing orthopedic problems, and the orthopedist discussing *x*-ray interpretations, I will try to stay in the orthopedic field. My experience in this work has been in conjunction with Drs. Carrell and Girard at the Scottish Rite Hospital for Crippled Children in Dallas. The attitude there has been to attempt to shorten the healthy femur, rather than attempt to lengthen the more poorly developed bone in the leg resulting from poliomyelitis or other infections.

In four of these cases, attempt of epiphyseal arrest by *x*-ray therapy has been tried. I have given from 1650 *r* to 2600 *r* to the lower epiphysis of the femur and upper epiphysis of the tibia in the healthy leg in these cases. Two of these children have shown fusion. The theory is that these diseased epiphyses may keep pace in growth with the two remaining epiphyses in the normal leg. Time will prove or disprove this theory.

A similar series of these poliomyelitis children have had efforts at surgical arrest made. We hope to report later the relative value and results of each method.

Dr. E. M. Wier, Fort Worth: The mechanism and pathological processes involved in the development of hip disease are still not as clear as we could wish. Our knowledge of the progress of these conditions has come principally through *x*-ray study. The very age at which it generally occurs, i. e., late childhood and adolescence, makes for a scarcity of pathological material. Slipping of the upper femoral epiphysis gives definite clinical symptoms in its early stage. Furthermore, this is the stage in which it is most easily distinguishable from other hip conditions by *x*-ray study. Likewise, if the diagnosis is delayed beyond this stage, good functional results are difficult to obtain. When the diagnosis is made, the patient's condition should be considered as urgent, and corrective measures instituted immediately. Since these cases are frequently bilateral, the other hip should be under constant observation until its epiphysis is closed. I should like to emphasize the point made by both essayists to the effect that a lateral picture of the hip gives much information in this condition which otherwise might be missed.

It seems probable that there is no real dislocation of the hip congenitally, but rather an absence of a bony acetabulum at birth. The head of the femur is thus unanchored and dislocation takes place after a force is applied, such as muscle pull in early infancy and weight-bearing later. It is important that this condition is diagnosed early since abduction for a relatively short time is the only treatment required in early infancy. A definite spasticity of the abductors may be the only sign in early infancy. As dislocation progresses, the gluteal and inguinal folds are higher on the affected side.

Realizing the disability associated with hip affections, it is obligatory for all physicians who are responsible for the child's well-being to be ever on the alert to diagnose hip disease at the earliest stage possible. If corrective measures are delayed, growth frequently magnifies the defect until even the most radical plastic bone surgery is unable to effect complete functional restoration. We are indebted to the essayists for the presentation of this important subject.

Dr. Felix L. Butte, Dallas: With all the emphasis that has been made regarding early diagnosis of hip-joint lesions in children, I would like to stress again the frequency with which the initial symptom is referred to the knee region. In regard to early diagnosis of slipped upper femoral epiphysis I am convinced that the condition frequently can be diagnosed even in the pre-slipping stage by the irregularity and decalcification of the upper femoral metaphysis, with in some cases distention of the capsule of the hip joint. I believe Dr. Egger's method of step cutting the femur in femoral shortenings should give earlier unions than the more nearly cabinet-maker type which often takes sixteen to twenty weeks to become solid.

Dr. Johnson (closing): The principal object in bringing this paper before the section is to present some cases that the general radiologist has few opportunities to study; there are so few children's hospitals compared to the number of radiologists. The subject is one calling essentially for close relationship between the orthopedist and roentgenologist. The cases presented are nothing new or spectacular, but demonstrate what can be done for many of these unfortunate children.

*The discussion is of the articles by Drs. Johnson and Anspach and Dr. Eggers.

The group I think that has been overlooked most is the one of slipped epiphysis, many of which cannot be diagnosed on the anteroposterior exposure position, but require the lateral position to identify them.

Dr. Eggers (closing): In reply to the discussion of the bone shortening procedure, I wish to say the majority of the cases are the result of hip joint disease. Most infantile paralysis cases are treated by epiphyseal fusions of the distal end of the femur. Bone shortening is not recommended in young children. Most of our patients are 12 years of age or older.

The purpose of using the entire shaft in the morticing is to have strong vascular bone in apposition. Thin mortices do not unite rapidly and in the *x*-ray plates the thin lateral portion of the mortice shows firm union last.

The early diagnosis of the slipping epiphysis is particularly stressed. The patients see their family doctor who has the *x*-ray plate made, and it is up to the radiologist in most cases to identify the early slipping. The treatment in the early cases gives good results, in late cases poor. Early fusion of the epiphysis is the only way to get satisfactory results.

THE SURGICAL TREATMENT OF UTEROVAGINAL PROLAPSE*

L. W. POLLOK, M. D., F. A. C. S.
TEMPLE, TEXAS

Writing of the anatomy of the uterus, Gray states: "Its upper part is suspended by the broad and round ligaments, while its lower portion is embedded in the fibrous tissue of the pelvis;" and to this Cunningham adds, "The lower cervical part is, however, more firmly fixed in place than the body and fundus, which possess a considerable amount of mobility." Taken together, these simple textbook statements illumine the mode of origin and point unmistakably to the rational treatment of uterine prolapse.

Today it is generally conceded that a prolapse is essentially a hernia. Hernia, in whatever part of the body situated, is due to defect of fascia. The suspensory ligaments of the uterus have been aptly compared to guy ropes, which are designed to steady and balance a structure. The function of supporting the uterus belongs rather to the musculofascial framework in which the cervix and lower third of the corpus are embedded.

Fitzgibbon[3] and Farrar[2] (the latter summarizing Tandler) have given detailed descriptions of the bands and layers into which the fascia divides as it passes inward from the pelvic walls to enwrap and support the organs within the pelvic cavity. This fascia, according to Tandler, is a true muscle fascia, the underlying muscle being derived from the organs to which it is attached.

In some places this fascia—termed endopelvic to distinguish it from the fascial lining of the pelvic walls—is strengthened to form ligaments; in other places it provides packing in the form of an areolar network to fill in the spaces between organs. The complex series of divisions into layers and insertions of fibers forbids any strict functional separation of its planes, since detachment or loss of elasticity at one point results in weakening of support throughout. As Cofer[1] has with great justness observed, prolapse of the uterus is, for practical purposes, not prolapse of this organ alone, but includes prolapse or stretching in various degrees of the other organs or structures within the pelvis, including ligaments, muscles and fasciae, and it is hence necessary to envisage this endopelvic fascia as a whole when considering prolapse of uterus and vagina.

The main burden of support of the uterus and vault of the vagina is, nevertheless, assumed by a certain portion of the endofascia, known variously as the cardinal ligament of Koch, the transverse cervical ligament of Mackenrodt, the sustentaculum of Bonney, the upper pelvic floor of Polk, and so forth. This structure consists of thick bundles of connective tissue and smooth muscle and extends in the base of the broad ligament from the pelvic wall to be inserted into the lateral wall of the uterus and vagina. It is described by Fitzgibbon[3] as "a distinct fan-shaped band lying between the lateral vaginal fornix and the side of the cervix in the plane of the broad ligament. . . . . Where the fascia springs from the pelvic wall it can be seen as a distinct sheet, but where it comes into relation with the viscera it loses the character of a sheet and divides up into various layers. This is necessary to provide for the dilatation which must occur during parturition." The fascia sends down a septum between the bladder and the uterus, which is known as the vesicovaginal septum, and one between the uterus and rectum, known as rectovaginal septum.

The uterus is likened by Farrar[2] to the hub of a cartwheel, the spokes of which are the various ligaments formed of thickened bundles of the endopelvic fascia. Where the cardinal ligaments from the two sides meet and join at this "hub," they constitute a diaphragm, pierced by the cervix and vagina. The manner of passage of the vagina and cervix through this diaphragm has been described with minuteness by Fitzgibbon:[3]

"The vagina, owing to the backward and upward direction of its axis, passes through the plane of the fascia at an acute angle so that its anterior wall which faces upward and forward is in relation to the under surface of the fascia at that part upon which the bladder rests. Behind this, the fascia passes obliquely across the sides of the vaginal fornices and over the top of them, being attached to the cervix, and the posterior wall of the vagina being longer than the anterior, is continued back so as to

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pass through the plane of the fascia behind the cervix. In this way the vagina is almost altogether below the plane of the fascia and has its attachment by fibers to the under surface. At the same time, the fascia sends numerous fibers to all parts of the vaginal wall. The cervix uteri definitely passes through the fascia, the vaginal portion being below, the supravaginal portion above the plane of the fascia, but owing to the oblique direction of the axis of the uterus running forward, there is a greater attachment of the fascia in front of the plane of the broad ligaments than behind, so that the vesicovaginal layer practically forms a sling across the pelvis, attached to the sides of the cervix, and upon which the uterus lies when anteverted, and the fundus resting upon the upper surface of the bladder."

While the fasciae of this diaphragm remains intact, it is impossible for the uterus to prolapse, but once they become torn or stretched, prolapse must sooner or later develop. Intra-abdominal pressure plus the action of gravity now forces the uterus down in the wake of the cervix and the walls of the vaginal tube, which is undergoing a process of extroversion. The vaginal vault, not the uterus, is the primary structure of the prolapse. The uterus prolapses because the vault prolapses. From the standpoint of prolapse, the central point of this vault is the cervix uteri. That the uterus may for a time resist the pull of its own neck and actually retard the progress of the prolapse may be supposed from the extreme elongation of the cervix, which is a frequent feature of the prolapsed uterus.

The main support of the uterus is fascia, but here it becomes necessary to inquire what part, if any, is played by the levator ani muscle in the prevention of prolapse. In his description of the cardinal ligament Fitzgibbon[3] says:

"This intermediate part of the endopelvic fascia between the ligaments of the bladder and the rectal layer is usually described as if it merely formed a sheet above the levator ani muscles, and the rectovaginal and vesicovaginal layers as though they passed between the viscera just above the fibers of the muscles, whereas the fascia is at a higher level at this part than the muscle."

He explains that though damage to the levator ani muscles has no effect on the support of the uterus, they and the fascia have correlated function, as in the case of the abdominal walls, where there is a containing sheet of fascia supported by muscles externally. Under normal circumstances the normal constant pressure applied to the pelvic viscera is a strain which is taken up by the fascia altogether and has no detrimental effect on its supporting power. Under abnormal circumstances of strain downward, the muscles of the pelvic diaphragm come into play and temporarily support the fascia.... In old women, prolapse developing without previous lacerations or tendency to prolapse appearing during the vigorous period of life may be regarded as the result of senile atrophy of muscle with probable increase of strain upon the fascia.

The site and extent of the fascial defect determine the variety of herniation that ensues. There are three main cleavage planes in the fascia, the postpubic, vesicovaginal and rectovaginal septa. A true hernia of the culde-sac, with a hernial sac of peritoneum, results from injury to the posterior portion of the vault. This is sometimes mistaken for rectocele. Prolapse of the posterior wall of the vagina, at a site corresponding to the rectovaginal septum, leads to true rectocele. When the site of the laceration is in the fascia which lies between the anterior wall of the vagina and the base of the bladder, cystocele results. Cystocele is a common accompaniment of uterine prolapse. When the fascial defect is limited to the region of the lateral fornices, the uterus will prolapse, with inversion of the vaginal fornices, but the bladder will not prolapse, because the supports of its base have not been weakened.

The degree of the prolapse depends on the extent of the injury and the time during which the prolapse has been in unchecked development. The final phase of vaginal prolapse is extroversion of the vagina as a whole, with procidentia of the entire uterus, bladder, urethra and rectum. Prolapse is usually of slow development. Originating in most cases in injuries to the birth canal during parturition—either from instrumentation or from spontaneous birth with protracted second stage—prolapse frequently delays manifestation until after the menopause. This slow development gives time to repair child-birth injuries before there are any serious consequences. But too often, as we all know, this advantage is lost in actual practice.

Overstretching of the fascial diaphragm during parturition, so that its normal elasticity is lost, and loosening of the fascial attachments of the cervix as an accident of labor have as consequence a weakening and attenuation of all the fascial planes of the pelvis, including the ligamentous supports of the uterus. One of the first manifestations of this weakening is retroversion; another is loss of normal obliquity of the vaginal canal. Both of these anatomic changes facilitate the development of the prolapse.

The first principle in the treatment of uterovaginal prolapse is repair of the injured fascial supports. This is, necessarily, an individual problem for each case. Where the original fascia is too deteriorated to be of further use for support, another structure must be used in constructing substitute anatomical relations. The problem is complicated in the case of younger women by the

necessity of preserving the function of childbearing. It has been my experience that women in the childbearing age may be satisfactorily treated by vaginal plastics and a suspension of the uterus, and that in women who have reached the menopause a vaginal operation is preferable because the supporting fascia and pelvic floor can be reconstructed with less postoperative shock and a more comfortable convalescence than if the abdomen were opened. Personally, I am trying to get away from a stereotyped operation in favor of a reconstruction of the pelvic fascia and supports to meet the particular pathologic condition existing in the individual case before me. Thus, I am not advocating any particular suspension operation during the child-bearing period, nor do I contend that any special technic should be adopted in procidentia.

I have recently reviewed our work in the surgery of retrodisplacement and of procidentia during the last ten years and subjected the data to analysis.

Our total number of operations for retrodisplacement of the uterus was 361. The age distribution of the patients is given in table 1.

TABLE 1.—*Age Distribution in 361 Hysteropexies for Retrodisplacement*

Age	No. of cases
Under 20	31
20-24	83
25-29	101
30-34	81
35-39	43
40-44	14
45-49	3
50-54	2
55-59	2
60-64	0
65-69	1
	361

For 315 of these cases we used the Baldy Webster operation; for fifteen, the Gilliam operation; for seventeen, the Mayo operation; for fourteen, plication of the round ligament. In six cases in which it appeared indicated, ligation of the tubes was carried out for sterilization. The appendix was removed in all the abdominal operations.

The following additional operations were performed at the time the suspension was done: cholecystectomy in seven cases, removal of large ovarian cyst in four cases, perineorrhaphy for complete laceration in one case, hemorrhoidectomy in five cases, inguinal herniotomy (double) in one case, Small's colopexy in five cases.

In 300 cases the anesthetic used for the operation was ether; in fifteen cases, cyclopropane; in four cases, gas nitrous oxide; in twenty-eight cases, spinal; in nine cases, local; in five cases, ethylene.

The average number of days in hospital in this series of hysteropexies was eighteen. The morbidity incident to the operations was as follows: sixteen wound infections, two pelvic abscesses, fourteen cases of cystitis and pyelitis, six pulmonary infections, seven cases of phlebitis. Eighty-six catheterizations and thirty bladder irrigations were done in the series. There were no deaths in these 361 cases.

Fifty-five of these 361 patients who were operated on for retrodisplacement of the uterus returned for additional operation after discharge from hospital. Of these, eight returned for re-operation because of failure of the suspension operation; eleven returned for hysterectomy; fourteen, for radium application; five for treatment of hemorrhoids; four, for cholecystectomy; two because of sterility; two, for thyroidectomy; one each for mastectomy, nephropexy (right side), salpingectomy, intestinal obstruction (band), intestinal obstruction (diverticulitis), removal of polyp of the cervix, operation for extra-uterine pregnancy (tubal), vaginal ureterolithotomy, Sturmdorf's operation of the cervix.

During the ten-year period our operations for procedentia number 53. The age distribution is shown in table 2:

TABLE 2.—*Age Distribution in Fifty-three Operations for Procidentia*

Age	No. of cases
20	1
22	1
30-34	3
35-39	3
40-44	5
45-49	11
50-54	5
55-59	7
60-64	10
65-69	6
70-74	1

Vaginal hysterectomy was performed in forty-three of these cases, in thirty by the Mayo operation and in thirteen by ligation and suture of the broad ligaments, with attachment to the anterior vaginal wall; the transposition operation was performed in nine cases, and inversion in one case. In fifty cases of the fifty-three the pelvic floor was repaired. Four patients required blood transfusion, and in one patient the operation was extended to include hemorrhoidectomy.

Ether was the anesthetic used in forty cases, gas in one case, ethylene in two cases, and spinal in ten.

Twenty-six days was the average length of hospital stay in the cases of procidentia. In twenty-three cases the convalescence was complicated by cystitis and pyelitis and in one case by bronchitis. The mean average highest temperature was 101° F. Thirty-one catheterizations and twenty-two bladder irrigations were necessary. One patient died from intestinal obstruction

on the twenty-third day after operation.

Six of the fifty-three patients operated on for procidentia returned to the hospital later for additional operation: two because of cul-de-sac hernia, two for colpocleisis, one for relief of postoperative obstruction, one for appendectomy. Three patients returned for medical treatment of goiter, pernicious anemia, or nephritis.

It is not the object of this paper to discuss technic nor to describe and compare the many procedures which have been devised to remedy a uterovaginal prolapse. I have intended, rather, to emphasize first principles, as these may be deduced from a careful consideration of the anatomy of the region. It is well, as Cofer[3] has said, to approach each case with a definite plan in mind, and in this, one will be guided by the age and general condition of the patient and by the known pathology of the case; but beyond this point to keep a flexible mind and "apply the proper operation to the individual rather than the individual to the operation."

The transposition or interposition operation of Watkins, for example, which uses the uterus as a plug for the hernial opening and a shelf for the bladder, while it carries a good reputation in its proper field of treatment of women past child-bearing age, must still not be attempted in elderly women with markedly atrophied uterus.

Colpectomy has its special field in inversion of vagina. Here we have a tube with widened caliber and much thinned walls, a combination highly favorable to recurrence of the inversion. To guard against such relapse, one must overcorrect the enlargement of the lumen as compensation for the thinning and tissue degeneration of the walls. Colpectomy, therefore, represents a distinct mutilation of the vagina, which is or is not important according to the age of the patient and her status as regards sexual relations. Subtotal colpectomy (LeFort's operation) obliterates the vagina; total colpectomy gives a small, shallow vagina. Either operation can be done under local anethesia, which is important where danger of shock must be kept to a minimum. Colpectomy is useful to correct inversion of the vagina following hysterectomy for procidentia, but it would be better to endeavor to prevent such a disappointing sequel to hysterectomy by following Farrar's recommendation to unite the ligaments at a new center, when the uterus, the original "hub," has been cut away, thereby insuring a long vagina without danger of prolapse and inversion.

SUMMARY

1. Uterovaginal prolapse is a hernia, due to defect in the fascial supports in which the lower third of the uterus and the cervix are embedded. This defect may be laceration or overstretching, caused by the use of instruments during childbirth or by an unduly protracted second stage of labor. Prolapse is of gradual development and should be prevented by early repair of injuries sustained during parturition.

2. Surgical treatment of prolapse centers on repair of the hernial opening. Success depends on the reconstruction of the anatomical fasciae of the pelvis, individualization of every case, and a surgical procedure to correct the pathological conditions which exist.

3. In young women the child-bearing function should be preserved by limiting the operation to vaginal plastics and a suspension of the uterus.

4. In women past the menopause it is rarely advisable to open the abdomen. A vaginal operation for reconstruction of the supporting fasciae and the pelvic floor and for removal of the uterus, if this is indicated, is preferable.

5. A series of 361 cases of retrodisplacement of the uterus, in which operations were done without any deaths, is reviewed.

6. In a second group, fifty-three cases of procidentia, treated surgically one death occurred.

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ABSTRACT OF DISCUSSION

Dr. Andrew B. Small, Dallas: Patients consulting us because of uterovaginal prolapse must be individualized as for other surgical conditions. If we attempt to treat these patients with some particular routine operation our efforts will result, in many instances, in dismal failure. Roughly we can divide these women into two classes: (1) those in the child-bearing age with a mild to moderate prolapse, and (2) those beyond child-bearing age with moderate to marked prolapse.

In the first group with a mild degree of prolapse some type of vaginal plastic operation, such as anterior or posterior colporrhaphy and perineorrhaphy together with an abdominal suspension or fixation generally is sufficient. In this age group with more prolapse I advise vaginal hysterectomy.

In the second group with any degree of prolapse I do a vaginal hysterectomy with ligation of broad ligaments and fixation to the lateral fornix of the vagina. The vault is not completely closed but packed with iodoform gauze. On those patients having also a marked cystocele, the Mayo type of vaginal hysterectomy is done, uniting the broad ligaments in the midline, threading the long ends of catgut through the anterior peritoneum and anteriorly through the vaginal wall. The operation is completed by doing an anterior colporrhaphy and perineorrhaphy.

All patients with uterovaginal prolapse have short, wide vaginas. One of the principles involved in correcting this condition is a vaginal reconstruction, converting the vagina into a long narrow shaped tube. For this reason a perineorrhaphy is done in every case.

THE TREATMENT OF INFECTIONS OF THE PROSTATE GLAND*

J. RECTOR NICHOLSON, M. D.
SAN ANTONIO, TEXAS

This discussion of treatment of chronic prostatitis excludes that type of prostatitis following specific infections and the types that produce urinary obstructions, such as median bars, hypertrophies and malignancy. It is limited to a consideration of the prostate as a focus of infection, and it in turn as a disease entity produced by foci of infection elsewhere in the body. In the male there is no gland whose importance and existence is so little known and understood by the laity. Out of fifteen successful men at a recent civic luncheon only three knew that a man possessed a prostate gland. One was a physician, one an undertaker, and the third a man whose father had recently had a prostatic resection. Despite the radio talks of quacks the great majority of the public is in ignorance of the presence and importance of the prostate gland yet there is no other accessory gland of the body whose healthy status is of so much importance to the welfare of man; and which is so subject to the likelihood of disorder.

It is conservatively estimated that 35 per cent of men past 30 years of age have trouble with the prostate gland, and that 15 to 21 per cent of the men past 50 have a potential malignancy. This is the highest percentage of malignancy of any organ in man's body and is surpassed only by the frequency of cancer of the female breast and cervix. The importance of the cervix and the breast for beginning malignancy and instituting adequate prophylactic treatment is well appreciated by the physician; unfortunately this is not so with the prostate. A few years ago the late John Caulk made the statement that in his long years of experience as a practicing urologist, only one man had come to operation, who previously had had his prostate examined prior to his visit for his present trouble. The experience of other urologists of long practice in treating the prostate bears out the truth of this statement.

Time does not permit a discussion of the complete anatomy, histology, and physiology of the prostate gland. Anyone so interested is referred to a standard textbook on these subjects. But there are a few points which need to be stressed, and old textbook pictures and opinions corrected. Most of the older writers in describing the size of the prostate compare it with the size of a horse chestnut. This does not give the physician adequate information. The truth of the matter is that the normal size of the prostate varies with the individual just as the size of the feet vary. It varies according to the race and familial characteristics of the individual. The normal prostate is larger in a man with a big bony framework than in the small compact one. It would be better if the emphasis were based on the functional capacity—the distance the man can propel his urinary stream. From the clinical standpoint we are concerned with two lateral lobes, medium, and occasionally a posterior lobe, which may be palpated rectally. The seminal vesicles are felt coming off the upper angles of the prostate laterally. Another practical division of the prostate from the standpoint of treatment is the supra-montane and infra-montane portions above and below the verumontanum, at which level the ejaculatory ducts empty into the urethra. Each lateral lobe is drained by twenty-five to thirty prostatic ducts that run almost perpendicularly to the lumen of the urethra rather than obliquely posteriorly as one would be led to think from the usual description of the proper method of prostatic massage. The functions of the prostate are to furnish a secretion which serves as a vehicle for promoting the longevity of the spermatozoa and the production of an internal secretion for the general organism.

PATHOLOGIC CHANGES

Briefly, the pathologic change found in chronic prostatitis is a diffuse inflammatory condition or multiple localized regions of round cells infiltration, with marked inflammatory or fibrous changes around the bladder neck. The bladder neck is usually irregular, with a red congested mucous membrane which may be studded with cysts. Frequently there are petechial areas extending from the prostate to the trigone. Where the prostatitis has been present for a long time the mucous membrane is shiny and pale. In the region near the verumontanum the openings of the prostate ducts can be seen plugged with mucus and debris. Changes around the verumontanum are redness, edema, polyps and occasionally flakes of pus. As a rule the passage of sounds is very painful even though an effective mucous membrane anesthetic be used. The pain is due to the stretching of the inflamed adjacent tissue which can not be reached by the anesthetic agent.

ETIOLOGY

The causes of prostatitis are foci of infection elsewhere in the body and extrinsic factors. The most common foci are infected teeth, tonsils, colon, and gallbladder. Although sometimes listed as a focus of infec-

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tion, diseased sinuses are seldom if ever a cause of prostatic infection. Acute infectious diseases such as influenza, typhoid fever, and scarlet fever are frequently followed by prostatitis which becomes chronic. So frequent is prostatitis found in men driving cars and trucks, it is often referred to as the traveling man's disease. The effect of the vibration of the car on a full bladder produces a congestion of the gland. Some men while driving a car over a long distance do not have the normal urge to empty the bladder until they have a backache which is not relieved until the bladder is emptied. Constipation, irregular sex habits, coitus interruptus, prolonged, ungratified sex desire, innocent petting parties, masturbation, salacious shows and erotic literature play an important role in producing prostatitis. Habitual beer drinking in small amounts has produced a prostatitis accompanied by impotency. Rarely do injuries to the perineum and posterior urethra produce a prostatitis, although a few rare cases have been recorded.

SYMPTOMS

The most frequent and accurate symptom of chronic prostatitis is a feeling of irritation or itching of the anterior surface of the urethra two to three centimeters back of the external meatus, which is relieved by urination. The next symptoms of importance are pains in the groins or inguinal regions and lower abdomen. Occasionally there is a feeling of uneasiness and itching in the bladder neck, frequency, and dribbling. At times the only complaint is a soiling of the underlinen and lack of force of the urinary stream, accompanied by extreme modesty in using public urinals. Sexual neurasthenia, impotency complete or partial, and premature ejaculation complete the picture of sexual disturbances. The referred pains are perhaps the most annoying and are the ones that cause the patient to seek relief. Low back pains, pain in the perineum, bearing down pains or a sense of fullness in the rectum are extremely common and are frequently assigned to pathologic conditions in other parts of the body rather than the prostate.

As a focus of infection the prostate may produce, by blood-borne toxins, ocular infections, arthritis, neuritis, secondary anemias, vasomotor skin disturbances, erythema multiforme, and gastro-intestinal functional complaints.

Systematically there is a rundown condition, fatigue, nervousness, and uncertainty in speech and action in advanced prostatic disease. Lassitude and mental dullness are more marked than the physical appearance would indicate.

DIAGNOSIS

The definite diagnosis of chronic prostatitis is made by the microscope plus the physical examination of the prostate by palpation. Frequently the first, and second and even the third massage of the prostate gland will fail to express any prostatic secretion for microscopic examination; most often there will be sufficient secretion following the examination; at least there should be some clear, white secretion. The educated index finger will be able by palpation to detect the contour and consistency of the prostate and tell whether or not pathological secretion will be obtained for examination. The consistency of the gland has been compared to the feel of the thenar eminence of the thumb. The infected prostate producing shreds and a mucous discharge in the morning is of a tubular type, and is the most frequently encountered in men below 45 years of age. In the parenchymal or mixed tubular and parenchymal type the prostate is soft and boggy, rolls under the finger, and does not empty. In this type the infection is in the parenchyma and not in the tubules, and there is rarely any secretion following the massage. There are modifications of the boggy type. Some nodular areas will be found which make one suspect tuberculosis in a man under 40 years of age and malignancy in a man above that age. However, there are areas which are hard and firm due to fibrous nodules following a previous infection. In some prostates, small soft areas will be found in which the infected prostatic tubules have coalesced and broken down from infection and blockage of the prostatic ducts. These areas are the ones that start draining after the second or third massage.

Prostatic stones may be palpated and show up plainly in *x*-ray plates. Due to localized prostatic abscesses which have been drained, small crater-like depressions in either lobe may be felt. From the standpoint of treatment it is important to determine whether the infection is in the tubules ascending from the urethra, or in the parenchyma from a blood-borne infection from foci elsewhere in the body.

The microscopic examination should be of fresh and stained specimens. In the fresh specimen, pus cells whether homogenously distributed or in clumps should be noted as well as spermatozoa, fixed or motile, lecithin bodies, epithelial cells, mucus, corpora amylaceous, Boetcher crystals, and debris consisting of broken down cells, spermatozoa, and mucus, *et cetera*. A gram stain should be made, time permitting; otherwise a methylene blue stain will give one a working plan. Frequently the type of organism changes dur-

ing the course of treatment. The predominant organism may disappear followed by another which did not appear to be the causative organism. From the examination it should be determined whether or not the pathologic lesion is in the parenchyma or in the glandular or tubular portion, for the successful treatment is dependent upon this information.

TREATMENT

The successful treatment of prostatitis must take in consideration the removal of causes and the specific treatment of the gland. The diet should be regulated or modified so that the patient will eat a large amount of fruit and vegetables, which will help to relieve the constipation. The older the patient the less his fixed habits should be changed. He should be urged to take a moderate amount of outdoor exercise suitable for his age; the younger the man the more vigorous the exercise. The patient should be urged to exercise until he breathes rapidly and aerates the lungs completely. Due consideration should be given the patient with a cardiac lesion or any contra-indication. Proper normal sex habits should be established and maintained. All sex-stimulating literature, shows and conduct should be interdicted.

The specific treatment of the gland will depend upon the type of prostatitis present. In the tubular type, mild prostatic massages should be given every four to five days. Sounds should be passed and the urethra dilated up to potential calibre of the individual. This can be determined by passing a bulb bougie and determining the largest size that can be passed in the largest portion of the urethra without undue pain and trauma. Frequently a meatotomy of the external urethra will be required before the maximum caliber of the urethra can be determined. The urethra of the average patient can be easily dilated to a 30 or 32 F., increasing a size each week. This will iron out any strictures in the urethra and help open the prostatic ducts. Care and gentleness must be used in passing sounds, else the urethra may become traumatized and produce an epididymitis.

With the prostate massage the seminal vesicles should be stripped; at time a vasectomy may be required to clear up the seminal vesiculitis. The dilation of the prostatic urethra helps to open the ejaculatory ducts. The bowels should be kept open with mild laxatives and enemas. The colon should be regarded as a focus of infection where colon bacilli are the predominant organism. In this condition it is well to change the bacterial flora of the intestinal canal from a putrefactive to a fermentative state by the means of Lacto-dextrin and the exclusion of milk, eggs, and butcher's meat from the diet. The use of warm enemas, consisting of 25 per cent magnesium sulphate followed by injection of four to eight ounces of cottonseed oil, which should be retained in the lower bowel, will help. This procedure should be carried out three successive nights, and repeated at weekly intervals until the stools are practically odorless. This technique will clear the colon as a focus of infection. Other foci which may serve to keep the prostate infected are the teeth, tonsils and probably the sinuses at times, skin and gallbladder. They should be taken care of in the usual manner.

A word should be said about the technique of prostatic massage. Few textbooks go into sufficient detail. The method of making parallel strokes to the prostate is good but not so effective as the method of applying proper pressure, perpendicularly to the gland in the direction of the tubules, with a slow rolling motion of the finger medialward. The prostatic ducts enter the urethra almost perpendicularly to the urethra. Hence the most effective massage will be to apply pressure in the direct line of the tubules which radiate perpendicularly from the urethra. The verumontanum is a point of orientation. The gland above is spoken of as a supra-montane portion and the part below as the infra-montane. To empty the ducts in the supra-montane portion it is necessary to hook the finger over the supra-montane portion at the junction of the seminal vesicles and prostate. This portion is invariably tender and needs the massage most. It requires a long index finger to reach it, in the majority of prostates.

During the early part of the treatment it is well to give the patient a course of sulfanilamide to prevent complications and flare-ups. The dose should vary from 45 to 60 grains a day over a period of time—from thirty-six to forty-eight hours, repeated every two or three days. The prostate that drains easily under the massage clears up rapidly with the removal of the causative focus of infection. But disease of the gland in which the parenchyma is infected is very persistent, even after all suspected foci of infection have been removed.

In the types of prostatitis recognized clinically by the fact that the gland rolls under the finger and does not empty, direct injections into the gland is the treatment of choice, preferably through the aid of the cystoscope.

CONCLUSION

The paper is limited to a discussion of the treatment of chronic prostatitis from a clinical standpoint; aside from prophylactic prevention, the urinary obstructions due to hy-

pertrophies and malignancies are excluded.

The etiology, pathology, symptomatology, and diagnosis are briefly discussed from a clinical standpoint, with the method of treatment best suited for the pathologic condition present.

508 Medical Arts Building.

ABSTRACT OF DISCUSSION

Dr. P. T. Donop, San Antonio: Dr. Nicholson has given a most excellent presentation of his paper. I want to emphasize the importance of the frequency of the malignancy of the prostate. From 15 per cent to 21 per cent of men past fifty have a potential malignancy. For this reason frequent examinations and early diagnosis of prostate diseases are very important.

Infections of the prostate cover a wide field. Sometimes we are too eager to date all infections back to some gonococcic infection. In treating the prostate it is important that we make smears and find out what the specific organism is so that more specific treatment may be instituted. J. H. Hill of the Brady Institute made smears from the prostate by taking smears through an endoscope without contamination from the urethra, and found 30 per cent of these smears were sterile, 30 per cent gave a positive culture and a negative smear, and 40 per cent gave both positive culture and positive smear. This shows that the prostate is a common field for infection, and in searching for focal infection the prostate cannot be overlooked.

The symptoms of prostate disease have been fairly well discussed except those produced by metastases. Lesions in any part remote from the prostate may be due to chronic prostatitis. Cases of iritis due to chronic prostatitis have been described by Iron and Brown. Arthritis due to chronic prostatitis is not a rare occurrence. Neuritis may be due to an infection of the prostate.

VITAMIN B_6 THERAPY FOR MUSCULAR WEAKNESS

Improvement or recovery of six patients from muscular weakness and incoördination occurred after injections of vitamin B_6, William Antopol, M. D., and Clement E. Schotland, M. D., Newark, N. J., report in *The Journal of the American Medical Association* for March 23.

The condition of the patients before treatment with vitamin B_6 was characterized by a waddling gait, difficulty in rising from the sitting and reclining positions, fatigue on walking and general bodily muscle weakness. In addition to the foregoing symptoms some of the patients also had a forward curvature of the spine.

All or some of these symptoms were no longer complained of after treatment. Improvement was stationary in five patients; relapse, with continued downward course, occurred in one patient.

The technical term for the disorder of these patients is pseudohypertrophic muscular dystrophy.

"In view of the promising results, though the patients have not been cured and are still under treatment," Drs. Antopol and Schotland say, "this form of therapy is being studied further and is also being investigated in conjunction with other vitamins, particularly E and riboflavin (a constituent of the vitamin B complex), and with the drugs aminoacetic acid and ephedrine."

THE WELTMANN REACTION IN MALIGNANT DISEASE*

A. B. CAIRNS, M. D.
AND
LUISE BRANDENSTEIN, M. D.
DALLAS, TEXAS

There have been many attempts to perfect a serological test which will show the presence of malignant neoplastic cells in the body. Amongst these one lists the Bendien, Fuchs, Freund-Kaminer, Brossa, Aron, Lehmann-Facius, Sehrt, and Hirszfeld as some of the more important. These serum tests were all perfected primarily to detect malignancies.

In 1930 Weltmann[9] developed his serum coagulation reaction. In his reports he claimed that the reaction showed only whether an exudative or fibrotic process was present. The presence of a specific process was not detected. In his earliest publications he mentioned the reactions occurring in a large variety of conditions. These varied from all types of inflammatory processes to neoplastic conditions. Application of the test to important series of malignant conditions has been made fairly recently by a number of European investigators with varying results. These will be further discussed later in this paper.

The Weltmann serum coagulation test is easy to perform and requires little apparatus. It can easily be done in the doctor's office. The reading of the test is quite definite and requires no great amount of experience and skill.

An accurately prepared stock solution of 10 per cent calcium chloride is made. This solution is 10 per cent by weight of $Ca\ Cl_2\ 6H_2D$. From this stock the following strength solutions are prepared: 0.1 per cent, 0.09 per cent, 0.08 per cent, 0.07 per cent, 0.06 per cent, 0.05 per cent, 0.04 per cent, 0.03 per cent, 0.02 per cent, and 0.01 per cent. Using the Wassermann type of tube, 5 cc. of solution are placed in each of ten tubes numbered from one to ten. The first tube contains the 0.1 per cent solution and the others have the lower concentration solutions in descending order. Into each tube is pipetted 0.1 cc. of serum which shows no hemolysis. The tubes are then mixed, put in numerical order in a metal rack, and heated in a boiling water bath for fifteen minutes. On removal they are read immediately. The number of tubes, reading from left to right, in which flocculation is present is then taken as the coagulation band. Weltmann designates this by the abbreviation, CB. Tubes may be clear or turbid

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but these can easily be differentiated from flocculation.

Normally tubes 1 to 6, inclusive, show the flocculation. In a few normal individuals the flocculation may go over through tube 7. Very faint flocculation in the last tube may be read as half way to that tube; *e. g.*, 6½ CB. If flocculation does not go as far over as the normal range, it is called a shift to the left. If flocculation goes beyond the normal range, it is called a shift to the right. Exudative conditions show a shift to the left. Fibrotic conditions show a shift to the right.

The mechanism of the Weltmann test has been studied at great length by Weltmann as well as others. Levinson and Klein[4] have shown that the hydrogen ion concentration of the solutions used has no part in the mechanism of the reaction. However, these authors have shown that in general as the *p*H of the blood is lowered, the coagulation band shifts to the right, and as the *p*H is raised, the coagulation band shifts to the left.

It has been thought by some that the serum proteins determine the coagulation band and that when a reversal of the albumin-globulin ratio occurs, the Weltmann shifts toward the left. Levinson and Klein[4] do not corroborate this. They concluded that there is no essential relationship between total serum protein, the albumin, globulin, and albumin-globulin ratio with the Weltmann reaction.

Weltmann[10] and co-workers studied the mechanism of the reaction and concluded that it depended on a complex relationship between electrolytes and varying proteins in the presence of heat. They also noted that the presence of hemoglobin caused the band to shift farther to the right. For this reason, the serum used must be free of hemoglobin. Also any disease in which there is an increased blood destruction usually produces a shift to the right. Weltmann also pointed out that if both fibrotic and exudative processes are present at the same time, the coagulation band may be normal.

The 185 cases studied in the following group consisted of a series of normals, a series of non-malignant conditions, and seventy-nine cases of malignant neoplasms all proved by biopsy. The normals were run to check the solutions, as were the non-malignant cases. The neoplasms were unselected cases that presented themselves to the tumor clinic at Parkland Hospital for treatment.

The cases have been grouped as shown in the following tables. There has been no attempt to select cases for this study. In many there have been repeated tests over a period of several months. The readings shown here are those that were made when the patient was first seen by us.

TABLE 1.—*Peptic Ulcers.*

Total cases studied	8
Cases with CB of 5 or lower	4
Cases with CB of 6 or over	4
Median CB of all cases	5.5

The lesions located in the gastro-intestinal tract have been interesting. Roeloffs[5] has claimed that the Weltmann reaction can be used to differentiate peptic ulcer and cancer of the stomach. In a very small series he showed that carcinomas produced a shift to the left and ulcers showed a normal band or a shift to the right. We have not been able to substantiate this. In fact as shown in table 1, we have noted ulcers with a marked shortening of the band. These were in active progressive lesions. As shown in table 2, there is a definite shift to the left in cancers of the gastro-intestinal tract. The shift is seen to

TABLE 2.—*Carcinoma of Gastro-Intestinal Tract*

Total cases studied	18
Cases with CB of 5 or lower	16
Cases with CB of 6 or over	2
Median CB of all cases	3

be rather marked, as the median CB of these cases is 3. However, in the desmoplastic type of lesion, there may be a slight shift to the right.

TABLE 3.—*Carcinoma of Female Genito-Urinary Tract.*

Total cases studied	25
Cases with CB of 5 or lower	19
Cases with CB of 6 or over	6
Median CB of all cases	5

In this series of malignancies of the female genito-urinary tract, the greater number of cases were carcinomas of the cervix. (Table 3). It can be seen that there is a definite shortening of the coagulation band. However, it is noted that the median reading is CB 5. Although the leftward shift is present in approximately 76 per cent of the cases, it is not a marked one. Many of these cases showed secondary infection. However, it was observed that in these the coagulation band was little affected by the extent of the superimposed inflammation.

TABLE 4.—*Carcinoma of Male Genito-Urinary Tract.*

Total cases studied	10
Cases with CB of 5 or lower	8
Cases with CB of 6 or over	2
Median CB of all cases	4

Although the series of tumors of the male genito-urinary tract is small, it is one of the most interesting ones studied. (Table 4). The shift to the left is quite definite and the median CB is rather low. In this series we had our largest proportion of CB 0 (zero).

All of the patients in these cases have since died.

TABLE 5.—*Carcinoma of Mouth and Throat.*

Total cases studied	7
Cases with CB of 5 or lower	4
Cases with CB of 6 or over	3
Median CB of all cases	4

In the group in which carcinomas were located in the mouth and throat, the number of cases is small and deductions are hazardous. (Table 5). However, the median coagulation band of 4 is not to be disregarded.

TABLE 6.—*Carcinoma of Skin.*

Total cases studied	6
Cases with CB of 5 or lower	2
Cases with CB of 6 or over	4
Median CB of all cases	6

The skin malignancy group is rather small and should be increased. (Table 6). It is seen that skin malignancies show little alteration of the band. The median CB of 6 shows a normal reading. The explanation of this normal range probably lies in the location. Skin malignancies are diagnosed at an earlier stage than any other type and are usually treated earlier.

TABLE 7,—*Miscellaneous Malignant Tumors.*

Total cases studied	13
Cases with CB of 5 or lower	9
Cases with CB of 6 or over	4
Median CB of all cases	5

The miscellaneous group of tumors is a rather varied one. (Table 7). However, considering them together, it is seen that there is a shortening of the band. The median reading, 5, of all cases in this group indicates that the shift is not a pronounced one.

TABLE 8.—*Summary.*

Total cases studied	79
Cases with CB of 5 or lower	58
Cases with CB of 6 or over	21
Cases with CB of 5 or lower	73.4%

In summarizing all cases of this series, it is seen that there is a very definite tendency for the Weltmann coagulation band to become shortened in malignant tumors. (Table 8). In this group, 73.4 per cent of all cases show a shift to the left. We feel that this is a significant variation.

The consideration of some individual cases is interesting.

TABLE 9.—*Case Study.*

Case 4: R. W., age 53. Very large nodular liver. No history other than enlargement. CB	6
Diagnosis: Polycystic liver.	
Case 5: M. C., age 42. Large nodular liver. No history other than enlargement. CB	6
Diagnosis: Large hemangioma.	

For example, in table 9, it is seen that two cases of suspected malignant involvement of the liver had normal coagulation bands. At autopsy one was seen to be a polycystic liver, while surgical exploration showed the other to be a large cavernous hemangioma.

The differential diagnosis of the conditions underlying an icterus is often very difficult. It has been shown that cases having marked involvement of the liver parenchyma, either inflammatory or cirrhotic in origin, tend to show a rather marked shift to the right. It is said that this shift can be observed when liver function tests are still apparently normal.

TABLE 10.—*Case Study.*

Case 1: E. C., age 38. Icterus Index, 93-105. Painless onset with fever. Clinically acute catarrhal icterus. CB	9
Case 2: B. F., age 59. Icterus Index 60-150. Painless onset. Atypical of cholecystitis. Surgically showed a common duct stone. CB	5
Case 3: L. H., age 54. Icterus Index, 23-108. Painless onset. Necropsy showed cancer of ampulla of Vater. CB	2

In table 10, the significant findings in three cases of icterus are shown. All three of these cases presented diagnostic problems. The Weltmann reaction apparently paralleled their nature almost exactly. The original tumor was small in case 3, and the liver and lymph node metastases were not bulky. The increased band in case 1 was due to the liver parenchyma damage.

TABLE 11.—*Case Study.*

Case 7: C. W., age 40. Admitted for surgery as fibromyoma of uterus. Condition very good. Symptoms of mass in pelvis. Nutrition excellent. Operated on 11-25-38.	
Surgical diagnosis: Carcioma of ovary with marked peritoneal involvement. CB	0
12-1-39. Patient died 1-31-39.	

The case presented in table 11 is very surprising. This patient appeared to be a very good surgical risk. She did not appear very ill and had little fever. Her complaints were no more severe than most cases of fibromyomas and she was not markedly anemic. It was thought there was a fibroid present with adhesions to adjacent structures. However, the Weltmann reaction showed no flocculation at all and the patient died of her carcinoma within two months.

The Weltmann reaction cannot be regarded as a specific test for malignant conditions. However, there is some type of serum protein change which occurs during the growth of malignancies. This produces the shift to the left.

The explanation of this alteration of proteins is difficult. First of all one thinks of the basis as being a secondary inflammation in the neoplasm. Many of the neoplasms studied here were the site of superimposed inflammation. However, these cases did not necessarily

show the shift to the left. Some with the most marked involvement showed bands close to the normal. On the other hand, some of the most marked shifts were in cases which showed no possibility of secondary inflammation.

A more probable basis would be the alteration of serum proteins due to tissue destruction both in normal and tumor tissue. It was observed that, in general, the most advanced cases showed the greatest shortening of the band. In advanced cases the CB was often 0 (zero).

The prognosis became increasingly unfavorable as the coagulation band decreased. Those cases which had a CB 0 (zero) were always in the hopeless class. In several instances this CB 0 (zero) was found in cases which clinically appeared to be in good condition. All of these soon showed signs of extensive carcinomatous involvement with death occurring within a relatively short time. It must be noted here that lobar pneumonia will also give a CB of 0 but with a very favorable prognosis.

The results of other workers are interesting in the light of those presented above. Borghetti[2] studied a series of 106 cases of carcinomas of different types. He found that a very large percentage of his cases showed a shift to the right. It was also found that irradiation produced a return of the band back toward the normal. He felt that the test had a very limited diagnostic value.

Tagliaferro[7] studied a series of 170 cases and reviewed the work of Borghetti. He found a shift to the right in a large percentage of his cases. He also observed a shift toward normal under irradiation therapy. He felt that the test had little diagnostic or prognostic value.

Teufl[8] studied a series of 150 cases of malignant tumors in regard to the Weltmann reaction. He found a shift to the left in these and explained it as due to necrobiotic changes in the tissues with possible secondary inflammation. The work of Roeloffs[5] showing a shift to the left in cases of malignancy has been mentioned above.

Beunders[1] and Schneiderbaur[6] report in a few isolated cases that malignancies show no variation from normal. Kretz,[3] with a series of fifty-seven carcinomas in a total mixed series of cases numbering 420, states that these show no variation from normal. He found no change even when the patient was in a chachectic condition.

The authors have no explanation for this lack of agreement in results.

In this study of seventy-nine cases of malignant tumors, it is felt that the Weltmann reaction is by no means a specific and conclusive diagnostic procedure. However, it is felt that it is a useful and simple procedure, which is of definite help in the diagnosis of malignancy. This is especially true of malignancies of the internal organs. The Weltmann reaction is a useful prognostic procedure when done repeatedly in a case undergoing therapy. It has also been useful in differentiating between benign and malignant tumor masses.†

CONCLUSIONS

1. Of seventy-nine cases of malignant tumors, there has been a shift to the left of the Weltmann coagulation band in 73.4 per cent.

2. The Weltmann coagulation reaction is not a specific and conclusive test for malignancy.

3. The Weltmann test is a useful aid in the diagnosis and prognosis of malignancies.

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Parkland Hospital.

ABSTRACT OF DISCUSSION

Dr. George T. Caldwell, Dallas: The need for a serological test which would indicate the presence of malignant disease within the body has long been keenly felt, and many attempts have been made to devise such a test.

The Abderhalden reaction first introduced as a pregnancy test some twenty-five years ago, was later studied with the hope that it might furnish a means of localizing lesions within the viscera, but without determining the nature of the lesion. The significant feature of this test was that instead of using a biological reaction to determine the effects produced, as had been done heretofore, Abderhalden used a chemical reagent known as "ninhydrin" as a test for the amino acids set free by proteolysis, but the exact mode of action of the test has never been definitely agreed upon.

Although this test for the localization of lesions has fallen into disuse, the principle of using definite

†Since the presentation of this paper, there has been a very comprehensive study of the Weltmann reaction published by Theodor Keller in Folia Haematologica, 62:430-461, 1939. In this series determinations on twenty-eight cases of malignant tumors were included with results very similar to those reported above.

chemical reactions for the determination of changes produced by disease processes has persisted, and is utilized in several of the serological tests which are being studied at the present time for the diagnosis of malignancy, or the more general one of studying the changes produced in the serum in various disease processes. Most of the recent work on tests of this nature has been reported in the foreign literature, and is, therefore, not readily available to English readers. This contribution, therefore, is quite appropriate and timely.

In the Weltmann reaction, the substances which are responsible for the coagulation when in contact with calcium chloride are present in normal sera. The test apparently measures some alteration produced in the blood serum by a great variety of pathological processes, and is in no sense specific for malignant diseases.

The cases with a coagulation band of zero are especially fascinating, since the normally occurring substance or substances upon which coagulation depends are nearly completely removed or inhibited. It would be enlightening, indeed, to know what changes have taken place in the serum.

The observation that the most advanced cases of malignancy give the greatest shortening of the coagulation band is apparently of definite value as an indicator of the extent of the process and of the immediate prognosis.

The test has been quite thoroughly tried out by Dr. Cairns, and it seems to have adequate reliability to be of use in advanced cases in deciding between malignancy and extensive processes of other types, or, as he has also emphasized, in following the course of patients who are under treatment. Its prognostic value seems to be established.

It has been very worth while to have this test brought to our attention in this effective manner.

The need for additional constructive work along this line is evident and it should furnish valuable returns. A reliable and sensitive serological test of this general type would be an outstanding achievement.

Dr. Marvin D. Bell, Dallas: I would like to ask Dr. Cairns if any correlation of the results with the Weltmann reaction and the sedimentation rate of red cells has been made.

Dr. May Owen, Fort Worth: I am particularly glad that Dr. Cairns has discussed the Weltmann reaction in malignant diseases as it is the only serological test for malignancy with which we have had experience.

In a small, mixed series of cases we found a comparatively constant shift to the left in the blood serum of extremely ill patients, regardless of etiology.

Our experience with this test in skin cancers has been similar to Dr. Cairns but the findings in the enlargement of the liver have been misleading. The most marked shifts to the left were observed in the blood serum of chronic alcoholics that at autopsy showed extreme fatty degeneration of the liver. We have not made repeated checks on patients with cancer following *x*-ray therapy; the few made have shown shifts to the right, that is, an average of better than 7, more nearly 8.

We have found the Weltmann test to be of little diagnostic or prognostic value in our limited observations.

Dr. Cairns (closing): In answer to Dr. Bell's question, we did not run any sedimentation rates in this study. However, they have been run by other individuals and do not always parallel the Weltmann Band. As has been emphasized, the result of this test must be interpreted in view of what other lesions the patient might have. We have not found that only carcinoma cases produce a shift to the left. Many conditions will produce this leftward shift. However, we do feel that if the coagulaton band is shortened and no common cause such as acute illnesses can be seen, malignant disease should be suspected.

OBSERVATIONS ON THE ETIOLOGY OF POLYCYTHEMIA VERA*

W. B. ADAMSON, M. D., F. A. C. P.
AND
J. E. STOREY, M. T.
ABILENE, TEXAS

The hematologic studies which followed the observations of Minot and Murphy[5] concerning liver therapy in pernicious anemia have resulted in an increased knowledge of the mechanism of hematopoiesis. Castle[3] has presented evidence that the hematopoietic substance produced in the stomach is composed of two parts, an extrinsic factor derived from food, and intrinsic factor present in the normal gastric juice, but deficient or lacking in the gastric juice of pernicious anemia patients. The clinical presence of demonstrable atrophy of the gastric mucosa in pernicious anemia and the pernicious anemia-like blood picture, which sometimes follow gastric resection or disease, also support this theory.

In 1932 it was suggested by Morris, *et al,*[6] that this substance present in the normal gastric juice and deficient in the gastric juice of pernicious anemia patients, and which is believed to be hormone; to which the term "Addisin" has been applied, might be present in excessive amounts in the gastric secretions of polycythemia vera patients, and hence play an etiologic role in this condition.

Baroth and Fulop[1] in 1935 presented evidence that the intrinsic factor of Castle, was present in the normal stomach secretions, absent in pernicious anemia, and present in excessive amounts in polycythemia vera. Considerable evidence, both clinical and experimental, supports this view.

Wilbur and Ochner[10] have found the incidence of peptic ulcer is four times as great in polycythemic patients as in nonpolycythemic patients admitted to the Mayo Clinic. Briggs and Ontering[2] have found that frequent gastric lavage controls nonfamilial, but not familial erythemia. Singer[9] presented a case of peptic ulcer and polycythemia vera in which a gastric resection was done. Following the partial gastrectomy the blood count was reduced to normal and remained so.

Herzog[4] has met with at least some success in the control of polycythemia vera by reducing the extrinsic factor in the diet.

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A simple animal test has been devised by Singer[8] which permits a rough quantitative estimation of the intrinsic factor in gastric juice. White rats placed on a basic milk and bread diet are used. Into them is injected gastric juice which has been neutralized by the addition of sodium bicarbonate. If the intrinsic factor is present an hematopoietic stimulation, as manifested by an increase in reticulocytes, occurs. Singer thus has shown that normal gastric juice contains a substance which stimulates reticulocytosis in the rat and that this substance is absent in the gastric juice of pernicious anemia patients. Working upon these findings the following experiments have been carried out. Reticulocyte counts were done according to the Osgood-Wilhelm technique.[7]

Cage 1 (Chart 1, Curve 1), consisted of seven rats, placed on the basic diet of Singer. These rats received subcutaneous injections of normal saline, and served as a control for the remainder of the experiments. As shown in the accompanying chart no significant changes occurred in the blood.

In the remainder of the experiments a slight modification of Singer technique was carried out. Each animal received subcutaneous injections of 5 cc. of gastric juice which had been neutralized with sodium bicarbonate. Blood specimens were collected on alternate days until the reticulocyte or red blood cell count had returned to normal.

Cage 2 (Chart 1, Curve 2), also contained seven rats which received subcutaneous injections of normal fasting gastric juice. In these animals a slight but definite reticulocytosis occurred in all rats. The average count was recorded in the accompanying chart.

Cage 3 (Chart 1, Curve 3), consisted of a like number of rats injected with normal gastric juice as in cage 2, but this gastric juice was collected thirty minutes after the administration of 0.00075 grams of histamine. A more marked rise occurred than in the above experiment, indicating that histamine augmented the hematopoietic content of normal gastric juice.

Cage 4 (Chart 2, Curve 1) consisted of seven rats which received fasting gastric

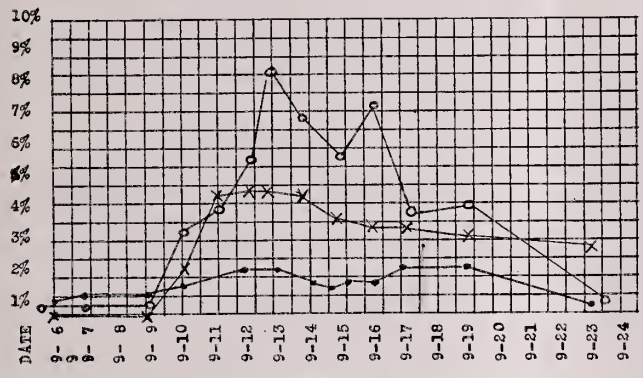

FIG. 1. (Chart 1) Reticulocyte response. Each curve represents average of seven rats: Curve 1—saline control (5 cc.)=.--.; Curve 2—normal fasting gastric juice (5 cc.)=x--x; Curve 3—normal gastric juice after histamine (5 cc.)=o--o.

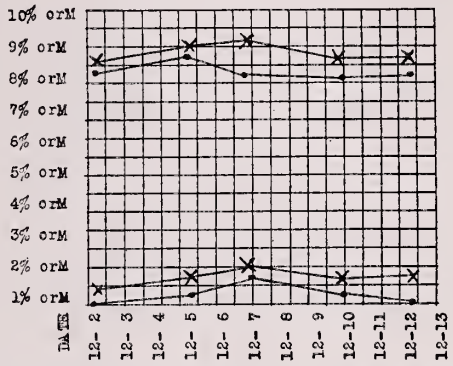

FIG. 2. (Chart 2) Reticulocyte and erythrocyte response. Each curve represents average of seven rats: pernicious anemia gastric juice. Curve 1—pernicious anemia fasting gastric juice (5 cc.)=.--.; Curve 2—pernicious anemia gastric juice after histamine (5 cc.)=x--x.

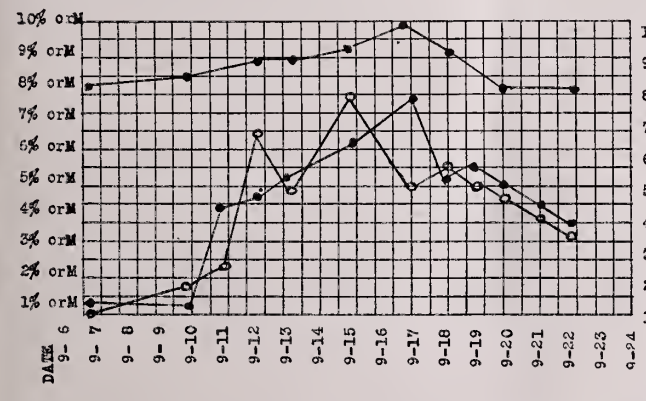

FIG. 3. (Chart 3) Reticulocyte and erythrocyte response. Each curve represents average of seven rats: polycythemia vera gastric juice. Curve 1—polycythemia vera fasting gastric juice (5 cc.)=.--.; Curve 2—polycythemia vera gastric juice after histamine (5 cc.)=o--o. Case 1.

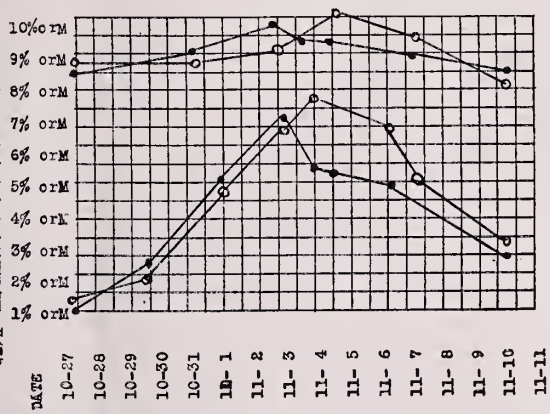

FIG. 4. (Chart 4) Reticulocyte and erythrocyte response. Each curve represents average of seven rats: polycythemia vera gastric juice. Curve 1—polycythemia vera fasting gastric juice (5 cc.)=.--.; Curve 2—polycythemia vera gastric juice after histamine (5 cc.)=o--o. Case 2.

juice from a patient with pernicious anemia. Reticulocyte and erythrocyte counts were done. No significant response occurred, verifying Singer's findings in this disease.

Cage 5 (Chart 2, Curve 2) consisted of seven rats which received injections of gastric juice of a pernicious anemia patient, collected thirty minutes after histamine was given. The negative hematopoietic response, as determined by reticulocyte and erythrocyte counts, indicates an absence of hematopoietic principle even after histamine stimulation.

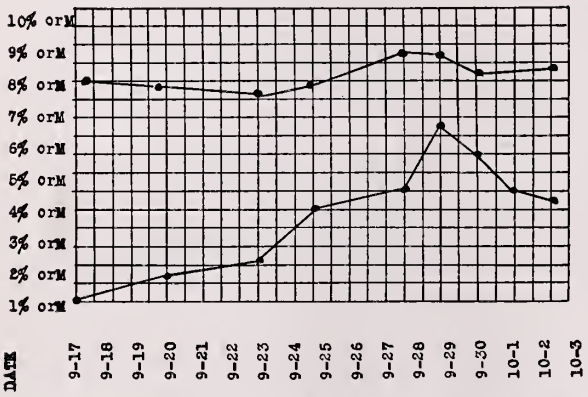

FIG. 5. (Chart 5) Reticulocyte and erythrocyte response. Each curve represents average of seven rats aften ten daily injections of 0.01 mg. histamine P04.

Cage 6 (Chart 3, Curve 1) consisted of seven rats which received injections of fasting gastric juice from a case of polycythemia vera. Here the erythrocytic response was greater than normal, and it seems that the amount of hematopoietic stimulating substance is similar in amount to that in the normal gastric juice after stimulation with histamine.

Cage 7 (Chart 3, Curve 2) consisted of seven rats which received similar injections of gastric juice from a polycythemia vera patient collected thirty minutes after the injection of histamine. The reticulocyte curve is similar to that obtained in cage 6, indicating that histamine does not further augment the amount of hematopoietic substance in the gastric juice of polycythemia vera patients.

Cage 8 (Chart 4, Curve 1) consisted of seven rats which received injections of fasting gastric juice from a second case of polycythemia vera. This was only a repetition of the experiment carried out in cage 6. Similar results were obtained as is shown in the accompanying chart.

Cage 9 (Chart 4, Curve 2) consisted of seven rats treated similarly to the animals in cage 7, but with gastric juice collected from case number 2. The curve is essentially as above, again indicating no further augmentation of the gastric hematopoietic principle in polycythemia vera by histamine.

In view of the rather definite effect of histamine on the hematopoietic substance in the gastric juice of normal humans, the question arose as to the effect of this drug on the blood count. Therefore the following experiment was performed. In cage 10 (Chart 5) normal rats received ten daily injections of 2 cc. of a 1:200,000 solution of histamine. As shown in the accompanying chart a reticulocytosis and erythrocytosis occurred. The action of this drug is not known, but it seems possible that it may have increased the hematopoietic substance in the stomach of the rat and manifested this effect with an erythrocytic response.

SUMMARY

1. Normal gastric juice contains an intrinsic factor which stimulates erythrocytosis, and the amount of this substance is increased following the administration of histamine.

2. This hematopoietic substance is lacking in the gastric juice of pernicious anemia patients, and is not increased by histamine.

3. This substance is increased in the gastric juice of patients suffering from polycythemia vera, but the amount is not further increased by histamine.

4. Histamine alone produces a reticulocytosis and erythrocytosis in rats, possibly by increasing the hematopoietic substance in the stomach of the animal.

5. Since the hematopoietic substance in the gastric juice of polycythemia vera patients is produced in excessive amounts, and the rate of manufacture is not further augmented by the administration of histamine, it is suggested that possibly histamine might be present in excessive amounts in the body of the polycythemic patient, or that the patient might be unusually sensitive to this drug, so that maximum amounts of the hematopoietic substance are constantly produced. If this be true, additional light is thrown on the etiology of this condition.

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ABSTRACT OF DISCUSSION

Dr. H. Klapproth, Sherman: I wish to express my appreciation for this very scientific paper. I am interested in this paper because, from a standpoint of irradiation therapy for polycythemia, we are interested in reducing the amount of the intrinsic factor. The pyloric region can be mapped out after the oral administration of barium, and this area can be treated by irradiation, with the idea of reducing the intrinsic factor.

In the March 18 issue of *The Journal of the A. M. A.* there is an abstract which deals with this part of the story, and only recently I treated a case of polycythemia, limiting my field of irradiation to the pyloric region. In this patient the red count was reduced from 7,000,000 to 4,000,000 by three fractional doses of *x*-ray, using one-half copper, 200 kilovolts, and 200 *r* at each treatment, the treatment being given every other day. The hemoglobin dropped in proportion with the red count. This treatment has only temporary beneficial effect and must be repeated in a month or two as the count rises.

I give this discussion to add inclusive evidence of the intrinsic factor as the etiology in this condition, and, second, to suggest this new type of therapy, that is, treatment to the pyloric region by irradiation.

CUTANEOUS PRECANCEROSIS*

LEE E. EDENS, M. D.
AUSTIN, TEXAS

In 1900 the tables of mortality for the United States disclose that tuberculosis stood first as a cause of death, while cancer was seventh. Since that time these diseases have been rapidly reversing themselves in this regard, and in 1934 tuberculosis had dropped to seventh place while cancer had gone up to second place, only being exceeded by heart disease which now occupies first place.

More accurate diagnosis and better statistics undoubtedly will account for some of this increase, but perhaps the more important factor is the fact that more people are living into the cancer age—that is, the fourth, fifth, and sixth decades of life. With the increase in the mortality due to cancer in general, cancer of the skin and orificial mucous membranes, which is cancer of the accessible parts, bears more than its proportionate share, which is now 7 per cent of the total. The incidence of cancer of the skin and mucous membranes is probably still greater than accepted statistics indicate, but this is impossible to prove. From the foregoing will be immediately understood the importance of the so-called precancerous lesions of the skin, for it is known that these lesions are the antecedent of most of the cutaneous malignancies. These lesions may be easily diagnosed and about as easily eradicated, and the possibility of cancerous involution avoided. This paper is a plea for early recognition and proper treatment of such lesions, as ultimately thus could be materially reduced the alarmingly increasing number of deaths from cancer.

No organ of the body offers such excellent opportunity for study of pathological changes as does the skin. Here one may observe the earliest macroscopic changes to the ultimate outcome. Advantage should be taken of the easy opportunity to take frequent biopsies of suspicious skin lesions. If this is done more frequently, early malignancies will be picked up in many unsuspected cases, and familiarity will be gained with those early histological changes which frequently become malignant if left alone.

The keratoses are the most common of the precancerous conditions; therefore, the most important. Under this heading will be considered the senile keratosis, seborrheic keratosis and chemical keratosis. Of these three the senile keratoses are by far the most important, for it is from them that so many of the serious malignancies arise. The exact percentage of them that will become malignant is not known, but outstanding pathologists estimate it to be 20 to 25 per cent, and all of them should be considered potentially malignant. These lesions are nearly always seen on the face and the back of the hands, and only rarely on the parts of the body covered by clothing. In other words, they occur on areas exposed to the elements and are seen on people whose occupations expose them more or less constantly to sun and wind. This will account for their common prevalence and also for the frequency of cutaneous epitheliomas in so many of our Texas farmers and ranchmen. They are only rarely seen in younger individuals, but are more commonly encountered in elderly persons whose skin is in that period of physiological involution known as senile skin. The lesions occur as rough, irregular, reddish-brown, scaly spots, varying in size from that of a pinhead to a half inch or more in diameter. In the earlier stages they consist clinically of a thickened, horny layer of scales which is firmly adherent, and if forcibly removed will leave a bleeding point. The scales will exfoliate from time to time, but will recur. The earlier lesions are barely elevated above the skin but later may become thicker and even wart-like, and when they do should be viewed with grave suspicion of becoming malignant. They may or may not be sharply outlined, and on palpation may be felt as an infiltration of the skin, especially so in the older lesions. Frequently they are multiple, some-

*Read before the Section on Medicine and Diseases of Children, State Medical Association of Texas, San Antonio, May 9, 1939.

times a hundred or more being counted on a single individual. Senile keratoses are especially dangerous because they so frequently give rise to squamous cell epithelioma, with the too often fatal metastasis. They may also give rise to basal cell epithelioma. These keratoses are especially dangerous if they occur on the mucous membrane of the lip and if left alone will certainly terminate in squamous cell epithelioma. The lesions of senile keratoses never disappear spontaneously and when they are noted to be growing, becoming raised and infiltrated, with more or less inflammatory reaction, should be looked upon with grave suspicion of beginning malignant change, and a biopsy on such lesions should be made for histological study. It is important to distinguish senile keratoses from seborrheic keratoses, for the latter very rarely become malignant and when they do are of the basal cell variety.

Seborrheic keratoses are very common in elderly persons, are seen mostly in the so-called seborrheic areas, that is, on the face, scalp, and upper portions of the trunk, and are always multiple, occurring at times in large numbers. They are sharply circumscribed, flat elevations covered with friable, greasy, waxy scales—probably the most distinguishing characteristic—and vary in color of greyish-yellow, brown, or black. The scales in contradistinction to the senile keratoses, are easily removed with a curet. They do not infiltrate the skin and are freely movable. Unless complicated by some other factor, seborrheic keratoses show no evidence clinically of inflammatory reaction and usually present no subjective symptoms. One type of seborrheic keratosis, the nevoid type, closely resembles non-hairy pigmented nevi.

Proper treatment, if given before malignant degeneration occurs, should cure all cases of senile keratosis. It would seem best to destroy all such lesions when discovered, especially if the life expectancy is long. However, obviously where such lesions are very numerous, such a practice would be impractical. In such cases it is best to keep the patient under careful observation and destroy those lesions that appear to be growing or to be undergoing malignant change. All such lesions discovered on the mucosa of the lips should be destroyed as soon as discovered. A satisfactory way to destroy senile keratosis is by electro-dessication. However, actual cautery or surgical excision may be used with good results. In some of the selected cases, for better cosmetic results, *x*-ray or radium application may be employed. In exceedingly superficial lesions, bichloracetic or trichloracetic acid may prove satisfactory.

It is not usually necessary to destroy seborrheic keratoses except for cosmetic reasons. However, it is probably advisable to inspect them at intervals because of the fact that they do on rare occasions become malignant, and there is always the possibility of a mistaken diagnosis.

Arsenic, if received in the organic form, such as Fowler's solution given in the treatment of psoriasis and of other conditions over a prolonged time or in tradesmen working in industries where arsenic is being handled—may cause keratoses. Such keratoses may show up as much as twenty to thirty years after discontinuing the drug or exposure and are very prone to become squamous cell epithelioma. As a prophylaxis, organic arsenic should not be given over a long period of time, and all prescriptions for such should be plainly marked, "Not to be refilled except by doctor's order."

It is common knowledge that in certain of the industries necessitating constant contact with tar, pitch, paraffin, soot, carbon and hydrocarbon compounds, and so forth, workers are very prone to develop keratoses in the areas where such substances more or less constantly make contact. And furthermore, such keratoses are very apt to become malignant.

Next to the keratosis in importance as a precancerous condition probably ranks leukoplakia. This condition is most frequently observed upon some part of the oral mucous membrane. However, it occasionally may be observed on the glans penis and on the labia. It occurs as milky or pearl white patches of varying shape and size, at times involving almost the whole of the mucous membrane of the buccal cavity. The resemblance to fresh silver nitrate stain of the mucous membrane is striking. Subjective symptoms are often absent, and the lesions may be found only on careful routine physical examination. The etiology of leukoplakia is not definitely known, but there is an interesting association with syphilis in that about 70 per cent of persons with leukoplakia are syphilitic. Almost all of them use tobacco in some form. It is important to differentiate leukoplakia from lichen planus, to which it sometimes bears a striking resemblance, and from lupus erythematosus, apthous ulcer, and Vincent's angina.

In the treatment of leukoplakia, all local irritation should be removed and general dental hygiene carefully seen after. Highly seasoned foods, hot foods and drinks, tobacco, and alcoholics should be abstained from. Small frequent doses of Epsom salts seem to have favorable effect. Antisyphilitic treatment in syphilitics will not affect the leukoplakia that may be present, but should be given and without fear of producing cancer in the areas. (It has been suggested from time to time that the administration of ar-

senic tends to stimulate cancer formations on leukoplakic areas; I do not believe this can be substantiated.) Patches of leukoplakia should be destroyed thoroughly and completely or left entirely alone. Temporizing methods are dangerous. In the more superficial lesions probably the best method of destruction is by electrodessication, but in the thicker lesions it is best to use the cutting current, or electrocoagulation. The thicker keratotic type of lesions should always be destroyed if at all plausible or possible. In the event that it is decided not to destroy leukoplakic lesions of any type, frequent inspection should be insisted upon, and at the least suspicion of malignant change, such as fissuring or ulceration, biopsy should be taken for careful histological study, and the area completely destroyed. *X*-ray and radium are not very successful in the treatment of leukoplakia. In some cases the involvement is so extensive that obviously it would be impossible to destroy the whole thing, and in such cases only the areas of suspicion of malignancy are destroyed.

Nevi.—Nevi, or birth marks, are probably the commonest of all congenital tissue malformations, and in the vast majority of the cases are not predisposed to malignant degeneration any more than any other tissues of the body. Nevi do, however, give rise to neoplasms of various types of varying degrees of malignancy; and while the type of lesion and degree of danger can best be determined by microscopic examination, nevertheless, with a little experience and observation one can get a fair idea as to which ones are potentially dangerous. We are all familiar with the highly malignant melanoma that makes its appearance in pigmented moles, either spontaneously or as a result of trauma, irritation, or careless, injudicious treatment. More rarely the less malignant basal or squamous cell epitheliomas may have their origin in these moles. Although it is certainly true that the greater majority of these very malignant neoplasms have their origin in the deeply pigmented, black or blue-black moles, this is not always the case, for occasionally they may arise from the less pigmented or even nonpigmented nevi, are designated as a melanotic melanoma, and are extremely malignant.

Naturally the question arises as to what to do about nevi in general—which should be destroyed and which should be left alone. The common fleshy moles seen on almost every part of the body, varying in size from the head of a pin to one-half inch in diameter, elevated above the skin, with or without hair, pinkish colored, or containing varying amounts of brownish pigment, may be left alone with impunity unless it is desired to remove them for cosmetic reasons, or unless they are constantly traumatized. They may be safely removed by any of the simpler methods, as by excision, dessication, cautery, or by electrolysis. The latter method, although slower, will give a better cosmetic result, and is the method of choice, if being removed for cosmetic purposes; but every care should be taken not to use this method on the potentially melanomatous black or blue-black moles. Vascular nevi and lymphangioma almost never become cancerous. Verrucous and cerebriform nevi may occasionally become malignant.

Of all the types of nevi, the so-called black or blue-black moles are by far the more dangerous. They may occur on any part of the body, even under the finger or toe nails, the auditory canal, and other places where they may escape notice even on careful examination. They may be very small or of considerable size. They may be flat, almost level with the skin, or may be considerably elevated. The surface is usually smooth, without hair, somewhat shiny, and with the characteristic color—black, grayish-slate, or gun metal. Malignant change may take place spontaneously, but more commonly transformation into melanoma is preceded by traumatism of some sort—irritation or improper treatment. When melanomatous change does take place, metastasis shows up very early; in fact, in about 50 per cent of the very earliest cases seen they have already metastasized to the regional lymph glands, and in many such instances such lymph glands are not palpable, the metastasis being found only on routine histological examination of the glands. What should be done about these potentially very dangerous moles? The trend of opinion seems to be to let them alone unless they are in such places as to be subject to constant irritation and trauma, as on the feet and hands, about the belt and collar band area, the shaving area of the face, and so forth, or unless there is reason to believe malignant change is taking place. If such lesions are to be removed, removal should be done thoroughly, by wide and deep surgical excision either by the scalpel or by the cutting current, making sure that no part of the growth or its satellites are left behind. If properly done, plastic surgery is frequently necessary to close the defect. The cells of these nevi are very radio-resistant, and radium and *x*-rays should not be depended upon for their destruction. It is this type of lesion in which biopsy is probably dangerous, unless immediate frozen sections are made and the complete operation carried out at the time.

Radiodermatitis.—It would seem that with modern equipment, technique and means of

measurement in the use of *x*-rays and radium, burns from these agents would be a thing of the past, but unhappily such is not the case, for a surprising number of these unfortunate victims are still seen. Aside from the fact that radiodermatitis is within itself painful, uncomfortable, and unsightly, there is ever the danger of malignant degeneration. Probably all areas of chronic radiodermatitis, if not too extensive, should be excised and the defect closed by plastic surgery as early as possible. Such measures, in addition to making the patient more comfortable, will minimize the danger of future malignancy. The more extensive cases should be constantly observed, treated palliatively, and such areas as appear to be becoming malignant should be surgically excised.

Old, extensive, traumatic scars, especially from burns, sometimes are the seat of malignant degeneration and follow about the same course as described in radiodermatitis as regards development, type, metastasis, and so forth, and the treatment is identical. If all extensive burns were skingrafted in the first place, it would almost eliminate malignancy from this source.

Xeroderma pigmentosum, a rare congenital condition that always develops in childhood, bears a close resemblance to chronic radiodermatitis, and farmer's or sailor's skin is a true precancerous condition since it always eventuates in multiple squamous cell epithelioma. It is incurable, and these unfortunate patients seldom reach adult life. Congenital lack of resistance to sunlight is probably the cause. Protection of the skin from direct or indirect sunlight by the use of gloves, broad brimmed hats, veils, and protective creams and lotions, is about all that can be done, except to destroy all areas of ulceration, keratosis, or epithelioma that arise by electrosurgery as soon as they make their appearance. It is probably best not to use *x*-ray or radium in these cases.

The condition known as farmer's or sailor's skin is seen on the back of the hands and on the faces of middle-aged or elderly persons who have spent most of their occupied time exposed to the elements. It is a rather prevalent trouble among the farmers and ranchmen of this section of the country. The skin is dry, thin, and wrinkled; on it are found permanent freckles and occasionally telangectasia and white sclerotic areas. The lips are usually involved, becoming dry and scaly, and fissure easily. Senile keratoses are very prone to develop in such a skin with subsequent epitheliomatous degeneration therein. Such skins and also senile skins that tend to develop senile keratosis should be protected from the elements as above described for xeroderma pigmentosum and should be examined from time to time, and all keratoses found should be appropriately dealt with. Ulcerations and chronic fissures should be viewed with suspicion, and biopsies taken for histological examination.

Cutaneous horn, so-called because of its slight resemblance to the horns of cattle, appears more frequently on the face, scalp, and hands, and less on the penis. It is seen more commonly in elderly persons, but may be seen occasionally even in children. It forms as a dry, solid, conical outgrowth of varying shape, size, and color, and is composed mostly of keratin. It has its origin more commonly in old senile keratosis, but may arise from a sebaceous cyst, a wart, or scar. About 12 per cent of these are said to become malignant at the base. All of these lesions should be thoroughly destroyed. Here again it is advisable to have histological examination made of tissue taken from the base of all such lesions.

Erythroplasia is a rare and unusual precancerous condition, more commonly seen on the prepuce and glans penis, but may involve the mucous membranes of the lips, mouth, and vulva. The lesions are characterized as reddened, velvety, shiny areas, which eventually show malignant ulceration with metastasis. The condition is very recalcitrant to treatment. Thorough and radical destruction or excision is about the only treatment that is successful.

Squamous cell epithelioma is a complication in about 4 per cent of all cases of lupus vulgaris and lupus erythematosis. Likewise, kraurosis vulvae, sebaceous cysts, chronic varicose ulcers, chronic traumatic ulcers with poor circulation, old fistulae, syphilitic scars, syphilitic interstitial glossitis and gumma, all sometimes undergo malignant change. Even chronic psoriasis, chronic hypertrophic lichen planus, and blastomycosis have been reported as having become carcinomatous.

In conclusion, it may be stated that cancer prevention is not a visionary ideal, at least from a cutaneous viewpoint. The necessity of careful examination of the skin and mucous membranes is as important in all physical examinations as is the cardiovascular check-up, especially in the upper age groups. And if this is conscientiously done, plus frequent biopsies, it will be safe to assume that the incidence and mortality from cancer would be materially reduced.

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2184 San Pedro Street.

ABSTRACT OF DISCUSSION

Dr. W. F. Spiller, Galveston: This is a very interesting paper on a subject of great importance, and much can be accomplished if the doctors in doing general examinations will keep in mind the recommendation here made regarding the appearance and treatment of lesions mentioned.

There is no general agreement clinically or pathologically regarding the distinction between carcinoma and precancerosis of the skin; that is, where one ends and the other begins, as the change is gradual. In *Cancer Review*, February, 1932, Bloch states, "We cannot as yet define it in theory, practically it is sufficient if we call 'precancerous' all those pathological changes in the skin and mucous membrane, and particularly those of the epidermis, which potentially form cancer, that is to say, those which, if left alone, will in a large but not yet exactly fixed percentage sooner or later (sometimes after a long time) turn into actual cancer. To a certain degree, precanceroses are histologically characterized by irregular epithelial proliferation, irregularities and unrest in the cell structure, atypical and polymorphous cells and nuclei; furthermore, by pathological mitoses and amitotic figures, by dyskeratotic manifestations and by reactive inflammation in the adjacent parts of the cutis. None of these features alone is typical; the combination of all or the majority is required."

Any skin abnormality may be considered a potential cancer, but here we are trying to show the conditions that are most apt to cause trouble. Dr. Edens has mentioned most of the conditions which precede cutaneous cancer, but I think Paget's disease, Bowen's disease, lymphoblastoma, and mycoses fungoides should be included in this group, as they become carcinomatous in a large percentage of cases.

I disagree with Dr. Edens in his statement that arsenic can be used with impunity in treating a patient with syphilis, who also has leukoplakia. When I was studying at the New York Post Graduate School, Rosen claimed that leukoplakia was a contraindication to the administration of arsphenamine. I still hold to that belief. I have seen cases of leukoplakia stimulated into carcinomatous growths by giving neoarsphenamine, and until we have had more definite proof, it would be safer to eradicate the leukoplakia before using arsenicals.

The dermatoses that Dr. Edens refers to as farmer's and ranchmen's skin is very prevalent in the coast area among fishermen and sailors, and I think that it is a forerunner of more skin cancer than any other condition that I see in Galveston.

Dr. D. Truett Gandy, Houston: There is a rich controversial literature relating to the use of the word precancerous, and I have long agreed with the school of opinion which holds that the term "precancerous" should not be used—that a lesion is cancerous or it is not.

Precancerous skin lesions, whatever their composition, are nonmalignant forerunners of malignant ones. The concept means just this or it means nothing. The clinician knows from experience when to suspect the presence of an epithelioma, whether it arises in previously normal or abnormal skin, and this is all he needs to know. But he cannot be sure of himself without microscopical verification. These two sentences tell the whole story of the diagnosis of epithelioma. Then why should there be any need for the term "precancerous"?

It is known that the skin of individuals from approximately 40 years old up more often develops cancer than in earlier life. It is also known that in xeroderma pigmentosum the skin is prematurely senile. It is likewise known that over-dosage with the roentgen ray accelerates the aging of the skin. We know from its very name that senile keratosis is a phenomenon of age. Before 40, epithelioma is unusual, before 30 it is rare, and before 20 it is almost unheard of. Thus we may fairly assert that the skin from the prime of life on is liable to epithelioma. And the only justification for the term precancerous, it seems to me, would be its employment in this sense —namely, *that the skin itself* is precancerous. If an epithelioma develops, of course it is due to predisposition, but what the nature of this predisposition may be is surely not illuminated by the word "precancerous."

But the term precancerous has been perpetuated through usage and will of course continue to be employed. The term will continue to serve the purpose of suggesting to the physician that certain lesions are at least potentially cancerous and should either be kept under observation or removed.

I would like to add a condition that is not common but is to be remembered because of the possible medicolegal complications. I refer to industrial trauma, especially about the face. I have seen several cases of frank epithelioma arising at the site of occupational injury. Therefore I would include trauma as a potential "precancerous lesion."

Dr. Edens (closing): I do not feel it necessary to apologize for the use of the term "precancerosis," even though it may be objected to by many good men, especially the pathologists. It is to be acknowledged that no real good definition can be given to the term, but even cancer itself has no adequate definition. However, this term has been in use by clinicians for many years to designate a very definite group of cutaneous conditions which is followed up more or less frequently by cancer, and since it serves the purpose clinically speaking, better than any term I know, I can see no reason for dropping it unless a better designation can be applied.

I purposely left out of this discussion Bowen's precancerosis, and Paget's disease, because it is now generally accepted that these two conditions are malignant from the start—Bowen's disease being intra-epidermic carcinoma from the beginning, and of very slow growth. Lesions of this condition have been known to exist as long as forty years. Paget's disease is now considered as intraductal carcinoma of the breast from the beginning.

SULFANILAMIDE ADMINISTRATION IN PREGNANCY

It is concluded from studies made at Johns Hopkins Hospital that until the effects of sulfanilamide on the human fetus or unborn child are better known the drug should be administered with extreme caution during pregnancy, *The Journal of the American Medical Association* for March 30 warns.

"The necessary observations in human beings should include a careful study of intra-uterine (inside the womb) development, birth weight and postnatal (following birth) growth in the infants born to mothers receiving extended sulfanilamide treatment during pregnancy," *The Journal of the A. M. A.* says.

"Using rats in carefully controlled experiments, Harold Speert has recently reported observations on the placental transmission (from the mother to the unborn child) of sulfanilamide. He found that administration of this drug to rats throughout gestation (pregnancy) results in the appearance of sulfanilamide in approximately equal concentrations in the blood streams of both mother and fetus. Prolonged administration of sulfanilamide to pregnant rats produces deleterious effects in the offspring, including increased intra-uterine and postnatal (after birth) mortality, decreased litter size, diminished birth weight and selective stunting of growth."

A PIONEER TEXAS EMASCULATOR. A CHAPTER FROM THE LIFE OF DR. GIDEON LINCECUM*

PAT IRELAND NIXON, M. D.
SAN ANTONIO, TEXAS

Each generation of surgeons is prone to believe that a surgical procedure is new because it has come to their attention in a new guise, when in reality it has only been rediscovered. Despite the printing press and books and journals, some part of the surgical experience of past centuries has been lost. We often find it a source of surprise just how wise our ancestors were and how much of their wisdom has been forgotten. Girolamo Fracastoro, in his *Syphilis Sive Morbus Gallicus*, written in 1530, had this feeling about syphilis when he attempted to explain its sudden appearance all over Europe about 1495. He thought this disease had been present in the world before and then disappeared, for as he says, time—"overwhelming everything in its decay—blots out things and the names of things."

Consider the question of debridement. We are likely to date this procedure to the World War when in reality Baron Larrey, surgeon general of Napoleon Bonaparte, was using it in 1790 and he states that he learned its value from Desault. And even the Talmud speaks of excising the edges of wounds and then suturing them. Incidentally, speaking of the Talmud and the Jews, Hitler's attitude toward Jewish physicians had its ancient equivalent in 1267 when the Council of Vienna forbade Jewish physicians to practice among Christians.

We are disposed to think that antiseptic surgery did not exist before the time of Pasteur and Lister, and yet Hippocrates recognized the necessity for clean hands and clean fingernails and, further, he emphasized the importance of good illumination, proper posture of the patient and capable assistants.

In this modern day of repeated editions of textbooks such as Osler's Practice of Medicine, Gray's Anatomy and Da Costa's Modern Surgery, it is easy to conclude that these experiences have no ancient precedents. However, Celsus' De Re Medicina appeared in 105 different editions and the Natural History of Pliny the Elder reached eighty editions.

Likewise, we of this generation are prone to believe that surgical sterilization of the mentally unfit, criminals and criminally insane is a modern day procedure. The fact that a pioneer emasculator came to Texas in 1835 disproves such a belief. The name of this pioneer is not new to some of us. It is Gideon Lincecum. For forty years after 1835 he lived a full, versatile life as frontier teacher, Indian trader, pioneer physician, philosopher, explorer, musician, archeologist and naturalist. It is in the last capacity that he was best known. Respected by Charles Darwin, Louis Agassiz, Alexander von Humboldt, Joseph Leidy, Asa Gray and many others, Dr. Lincecum takes rank alongside the first naturalists of his day. Anyone who is interested in the many picturesque chapters of his unique career will find a delightful delineation in Naturalists of the Frontier, a book by Dr. S. W. Geiser of Southern Methodist University. Only a few of the facts of his life will be set down here. They are taken from his biography and letters in the Archives of the University of Texas.

The life of Dr. Gideon Lincecum presents many paradoxes. On his father's side he was related to the Lincecum family, prominent in the State of Maryland, and, to bring him nearer to Texas history, his maternal grandmother was a sister of James Bowie's grandfather. He was born in poverty away out on the fringe of civilization, in 1793, when George Washington was serving his second term as President of the United States. He was born, as he said, in the smoke of the American revolution. He spoke of his father as a rover, unlettered but strong of body. He returned from the war of the American Revolution "highly educated," the son said, "in all arts, strokes and punches in the pugilistic science" and bully able to whip every man in the settlement who dared oppose him. He said that there was nothing remarkable about his mother, "only that she was entirely illiterate, could outrun anybody, was very industrious and energetic."

He went with his family from Georgia to Mississippi. Later he came to Texas. His own words best present his early years:

> "I was the first born of a mother not quite sixteen years of age, and was educated by the Creek Indians and hunters of a frontier country, except seven months schooling by a drunken teacher, until I was fifteen. Not feeling satisfied with the chances which surrounded me, I left my home in the woods, and going to the nearest little court house town, hired myself to a merchant of the place at $8 a month."

After a varied career as a store clerk, soldier, tax collector, school teacher, farmer and merchant, he decided on what he called a "wider field of action," so he bought a few drugs and began to practice medicine in Mississippi, having read medicine at various times. After a few years, he records, "I felt tired of killing people and concluded to quit the man-killing and try to procure a living by some other method." He hit on this alternative: he visited a Choctaw Indian medicine man who agreed to teach him what he knew

*Read before the Texas Surgical Society, Fort Worth, Texas, April 3, 1939.

of medicinal plants. Together the two went into the wilderness for six weeks. When the course of instruction was finished, Doctor Lincecum paid his instructor $21. The Indian returned $10 saying, "You are a young man and will need this."

He chose to combine his Indian plant-lore with what he had read in medical books. The combination was a definite success because he was able to record in his autobiography: "My practice was growing better every year. In my annual advertisements, I stated that I would not charge for a failure to cure fever of any kind. During the seven years at Columbus, I booked $51,000 besides the cash fees." But prosperity, in his opinion, was bad for his family:

"The boys drank and dressed extravagantly, and the girls dressed and danced inimitably. They spent from three to five thousand dollars a year and seemed to act as though the source from which the money came was inexhaustible . . . To remain and let them marry their equals I could plainly see would finally terminate in the most abject poverty and wretchedness. So I determined to carry them to a country where the surroundings and conditions would be more promising. This is the untold cause of my breaking up so abruptly the lucrative business in Columbus. I sold my place, packed my medicines and furniture and started my wagons in charge of two sons to Texas."

After locating in Texas in 1848 (he had made a short trip previously in 1835), he seems to have devoted less and less time to medicine and more and more to his studies in natural history. The Civil War came and then Reconstruction as its tragic sequel. But Gideon Lincecum would not be reconstructed; despite his 75 years, he moved to Mexico where he was able in an atmosphere of peace and quiet, to spend his few remaining years close to Mother Nature that he loved so well.

Doctor Lincecum's preparation as a physician was practically nil; he had no preceptor and no formal training. If he were living in our day he would be regarded as an irregular or even a charlatan. Indeed in his later years he considered himself an Indian herb doctor. "Nature has sowed the remedies for Texas diseases in Texas soil," he thought. He had little respect for allopathic physicians. On one occasion he said that "while the Indians are dispensing the fiat of death to six men in your country, five times as many are killed by scarlet fever and the doctors in this." In a letter to a patient with tuberculosis he said, "Swing your arms, inflate your lungs, hold in the cough, and make positive resolutions that you will not remain a prey to disease and its friends the doctors." And oftentimes he put the doctor and the preacher in the same category as in this statement from a letter to one of his patients:

"The whole catalogue of what are termed diseases, and which we are taught to believe—both in medical and sacred superstition, are vile, malicious entities, walking the land with dire intent, and pouncing upon the innocent as well as the guilty; when the truth is, there are no entities. Disease is a condition, the cause of which in our ignorance, we are daily swallowing! We have colds and rheumatisms, fevers and tic douloureux, odontalgia, hysteralgia frigida, impotentia, and many other frightfully named negatives, in our catalogue of imaginary buggers, who are busily engaged in the service of the doctors and preachers, who created them for that purpose. We pay these two armies of false interpreters, high salaries for stultifying the community."

There is much of a philosophical nature to be found in the letters of Gideon Lincecum. Often the word "infidel" appears. And yet he had great respect for the teaching of Jesus, whom he referred to, without seeming sacrilege, as "our best Democratic Brother" and the "Good, virtuous Democratic Nazarene." He once wrote: "My mind clings to the idea of a life beyond the grave—immortality; that idea is supported by the exhilarating influence of desire and hope." Many of his happy expressions would do justice to Poor Richard with whom he was quite familiar and from whom he may have obtained his inspiration. Here are a few examples:

"The school of adversity is the best of all schools; more especially, if while we are young, we do not possess sense enough to believe and profit by the advice and friendly suggestions of our parents and others who feel an interest in our destiny." "If the fathers eat sour grapes, the children's teeth will be set on edge." "At my age—near 70—the short time that is left for me will not permit me to do more than to mark a few of the prominent trees as I pass through the dark wilderness of ignorance and badly begotten sinners." "Truth, itself, may be retarded for ages by saying too much; all truth will shine forth in due time."

There is one feature of Doctor Lincecum's career which deserves special consideration and which has furnished the title to this paper. It has to do with eugenics. Legalization of sterilization of the feeble-minded, the mentally defective, the criminally insane and the unfit generally to whom child-bearing should be denied is of comparatively recent date. California has had such a law since 1909 and today twenty-seven other states have similar laws. Upward of 30,000 sterilization operations, about one-third of them in California, have been done in the United States. The subject, however, is not new. Johann Peter Frank, a German physician, in 1779 thought that "the mentally diseased and deficient should be castrated to prevent deterioration of the race." Doctor Lincecum was an ardent—almost fanatic—advocate of the procedure. At first he advised its use as "an unfailing antidote" on those early precursors of the carpetbaggers who were endeavoring "to incite our black population to

cut the throats of our wives and children."

He was of the opinion that capital punishment should be abolished. He felt that such punishment, brutalizing to the last degree, served only to increase crime instead of diminishing it. He contended with all the vigor of which he was capable that the knife, properly and judiciously applied, would do away with the unfit and within a few generations the highest and most perfect forms of humanity would develop. As he put it: "Cut and trim and purify the race as fast as possible." He, of course, knew nothing of vasectomy and what he advocated was castration, "the sin-destroying and soul-purifying proposition." For years he fought for this proposition and no advocate ever fought with greater enthusiasm or warmer ardor. He wrote to every county judge and every editor in the state in addition to numerous private individuals inside and outside the state. Later he memorialized the state legislature "to abolish the old useless, heathenish system of punishment and substitute castration as a remedy for all crime and violence." In his memorial he said:

"The gallows, branding iron, whipping posts, penitentiary, solitary incarceration, and many other minor modes of barbarous cruelties, have been brandished in the face of community, age after age, from time immemorial, and crime and immoral action are unmistakably increasing. It is then self evident, that the remedy does not meet the indications. It is indeed no remedy . . . The remedy suggests itself. We all know that if one-half of the pains were taken to improve the human race that there is to improve a breed of sheep, the blood of horses, a stock of cattle,—we might entertain some hope for the improvement and even perfectability of mankind. But so long as physical and moral deformity and disease are licensed to perpetuate themselves, the breed of ill-shaped sinners will continue to multiply so rapidly as to postpone the prospects for physical beauty and intellectual progress beyond the boundary of human hope."

Characteristically, he says that his suggestions were received in the legislature with "a few sarcastic remarks accompanied with a good deal of half-drunk, goggle-eyed laughter."

Later he wrote to a minister: "Why not consider of the degenerated, vitiated, scrub races of humanity as you would of the horses, cows, etc., and apply the same potent remedy to purify and improve humanity that you apply with such unfailing success among the lower orders?" He spent much of his time in furthering what he called "the Texas Plan to remedy crime and outrage." He was willing to assume the authority in cases where he thought it necessary and apply emasculation regardless of the consequences. "But whether they favor our views, with legislative enactment or not," he wrote to a friend, "we are determined, in all such cases as is said to have occurred in your parish, to assume the authority, and apply emasculation, regardless of the consequences. Talk about 'tar and feathers' indeed. Those fellows glory in such proceedings, and brag about it when they get home. It is capital for them to work with. If you Louisianians are too faint hearted to protect your families, by putting into practice the only remedy for northern negrophobia, just send them over here, and we'll break them from sucking eggs." To an Alabama editor, he said:

"Having seen an article in the *Weekly Delta*, which was extracted from your paper, on the subject of a case of interference with the negro population of Sumter County, by a couple of abolition scoundrels, I thought it would be nothing amiss, for me to communicate to you the Texas plan of dealing with such heartless villains . . . Apply the Texas remedy to them, and they will pester your negroes no more, and it will operate as a damper, and a terrifier to the negro-loving types of the white race, everywhere."

"Here in Texas," he said in another letter, "we have a potent remedy for such disturbers of the peace, an unfailing antidote, which we are determined to apply in every case where it is satisfactorily proven on any man that he has been trying to excite the spirit of insubordination with our negroes. It looks pretty rough it is true, but it is not too much so when applied to those who are in a thousand ways endeavoring to incite our black population to cut the throats of our wives and innocent children. We shall put it in practice, 'sure'." To prevent crime, to protect society and to improve the human species, there was but one single remedy: "Society must trim and purify the sources and fountains of procreation. The effort to teach and frighten, and whip and force the blind animal propensities into the sphere of duty and moral subordination is a failure attributable only to our ignorance of the philosophy of animal nature." He thought the moral and physical condition of the race could be improved by attacking the retrograde tendencies at their source: "Let us direct all our energies against the antecedents rather than to keep on trifling with human misery by experimenting with doubtful success in the consequents." As proof that improvement was needed, he cited "that in 200 years not a vice has yielded; pauperism has not receded; war has not been made to quit the field; drunkenness and writhing mania stalk abroad; and crime and violence can compromise the justice of our laws and our religion with money." He laid considerable store by phrenology and was wont to utilize phrenological arguments in defense of his "Texas Plan": "I tell you, that it is a demonstrable truth that all crime and violence are attributable to predominant, 'un-

terrified and misdirected amativeness,' and to nothing else."

Contemporary Texas physicians would not have escaped the application of this remedy if Doctor Lincecum had had his way. He had this to say to a New York physician and to him there must have been a factor of humor in the statement:

"Now don't feel disappointed at me for not pitching into the doctors. They are to be sure, a devilish poor deceitful set; generally having short heels, which enables them to rear back upon their dignity gracefully. But they can't help it, and we will only trouble them so far as to stop the short heeled breed by the application of the scalpel to the root of the evil."

Not content with applying his plan to mental defectives and criminals, he thought the state might be benefited by its application to the politician and thus placed himself in advance of modern-day eugenists. His respect for the politician is well expressed in this picturesque quotation: "There is no honesty amongst those who are willing to assume the leadership, to prevent them from riding the poor devils as soon as they break them to lead gently. Well, that's no crime. I consider it, however, a hell of a misfortune." In his diary of 1867 he made some philosophical observations on the politicians of his day and then offered a rather radical remedy: "It is to me a matter of astonishment how low highly educated men will degrade themselves, for the sake of getting into office. This subject does not belong to the natural sciences properly, but it needs serious investigation and a remedy. Emasculation is offered." On another occasion he wrote in defense of his "Texas remedy," his "sin-destroying and soul-saving proposition:" "It will not only stop crime, but it will prevent the increase of the vicious types. Try it on your delinquent officers first."

And again he said:

"In spite of all I can do to hold in, my inner, uncontrollable self, will say damn them. Who are we to place confidence in? How long will it be before the people will lose confidence in every man who offers his services, in the public trust? Don't you think that society could greatly benefit itself in diminishing the possibility with these fellows, to reproduce their kind, by a free use of the knife on their genital apparatus?"

Opposition to his plan was presented from various directions. A New York editor raised strenuous objections to the implied "disgusting brutality." Doctor Lincecum replied to his objection by saying that he probably would not finish up as far as Long Island and "I might not take you even if I should get there."

Of his sincerity, no question can be raised. In season and out of season he proclaimed the Texas remedy. An example of his sincerity as well as capacity for work is the fact that he sent out 676 copies of his memorial to the legislature, the equivalent of over 3,000 typewritten pages. He was able to present many examples of the beneficent results to be derived from proper use of what he called that "convenient little implement, the knife." He cites this instance of a calloused criminal converted into a most benign individual:

"A negro, thick neck, blobber lipped, ample jole and flat top. He was a vicious, disobedient, indolent, drunken thief, and amativeness so large, that he was in the habit of committing rape on the wenches of his own race, and the neighbors had threatened to shoot. At length it was discovered that he had impregnated an idiot white girl that was suffered to stroll about the settlement. At that act of unparalleled depravity, the people were highly excited, and while the idiot's father was gone to town in search of an officer, three gentlemen who understood the case of the negro's depravity, as well as the remedy, went into the field where he was at work and castrated him. Two years later, I heard his mistress say that she would not take a thousand dollars for her share of the negro's services; besides being a full hand in the farm, when he came in at night, of his own accord, he never slept, until every young and tender thing about the place was fully provided for,—lamb, pig, or young chicken—all received his protecting care."

As Doctor Lincecum grew older he was wont, as in a dream, to look far into the future and visualize the Utopian results of his idea, and this is what he saw:

"Dashing 10 or 15 thousand years ahead, I find myself in the society of highly *progressionists*, possessing perfect knowledge of individual rights. Like the honey bees, they have perfected their government; every one knows his duty, and he will perform it or die—tall, upright, harmonious, and as much alike as deer. There they stand, knife in hand, ready, and by the authority of right, are promptly willing, to trim and prune, emasculate and purify the genus homo of every unclean thing."

This versatile old Texan probably little realized how prophetic was this statement of his, written on May 1, 1857, from his home at Long Point, Washington County, Texas, which we shall quote in closing: "I am old now—near 70. You must not expect too much. I shall not have time to do more than start the move. This movement is not perhaps altogether adapted to the present generation, but it may become the business of the next."

And now, finally, lest we leave this pioneer physician of Texas exposed to view as a fanatic and a dreamer, let it be said that Gideon Lincecum would have stood out in any civilization and almost in any capacity. We might consider him unlettered and even boorish; and yet, without instruction and without encouragement, through enviable versatility and sheer persistence of purpose he achieved a degree of success and culture which we

may well emulate. Doctor Geiser happily epitomizes his life in these words:

"Rough, untrained, sometimes uncouth, this brave old man held through long years to the even tenor of his way. The generation that knew him as physician and naturalist is fast passing; only here and there are those who were acquainted with him, who can appreciate the handicaps under which he worked. In the light of all that can be learned of Lincecum's career, one can only say: it is cause for wonder not that he did so little, but that he accomplished so much."

In his day and in his way Dr. Gideon Lincecum was a great Texan.

1022 Medical Arts Building.

WE MEDICAL STUDENTS*

JOHN W. SPIES, M. D.
(Dean, University of Texas, School of Medicine)
GALVESTON, TEXAS

Fellow students, faculty, friends, and guests:

It gives me great pleasure, indeed, to welcome you here officially. However, I am more eager to extend the hand of friendship and to greet you as fellow students. I believe firmly that this common bond will unite us closer than any other and that through the coming years of defeats and successes we will draw closer and closer to one another.

It is commonly thought that entrance into medical school signifies the beginning of medical education, and it is even more unfortunate that there appears all too often the idea that the bestowal of a medical degree indicates the termination of studies in the healing art and science. To my mind, however, you entered upon your medical studies some years before you came here. One can go even farther and say that, as medical students, there should be a constant addition to our knowledge throughout the years and that there should be no let-down in our education. If, then, our knowledge can be translated into wisdom, we shall have reached our educational goal.

It was not simply to fill in your years and to give you greater maturity that courses, commonly designated as premedical, were prescribed before your entrance into the medical school. We consider that those studies were medical ones, and you may rest assured that we gave them careful consideration in our general appraisal of you.

Certainly, you will find here a greater concentration upon those studies which deal explicitly with the healing art and science. Although various agencies and persons have at times contributed notably, yet the outstanding developments have occurred from the efforts of the State of Texas and the Sealy and Smith Foundation. They have at great expense created a large physical plant for your use, and even more important they have assembled a group of scholars and gentlemen to give you assistance. Even should each of you pay the sum of one thousand dollars a year it would not be possible for us to operate the various medical institutions of the University of Texas on that amount. There is no first-class medical school in the United States that is supported by fees alone. Thus it is that wherever you choose to pursue formal medical studies you will find that either through public agencies or private efforts you have been greatly relieved of the financial burden. In return the people rightly expect a great deal. Although it is manifest that you should have a good standard of living, yet there remains a broad sense of public spirit and appreciation which you must display at all times. The people are interested in their health, and they have chosen us to help them maintain it at the highest level possible.

Despite the magnificence of any physical plant or the scholarly attainments of a helpful faculty it remains to you as an individual to develop your own capabilities. Each of you is different, and yet there are certain fundamental traits which are alike in any group. We older students will give you our very best in order to develop those qualities which will make each of you the best doctor possible. It is not our intention to create situations which will force you to leave school or to fail in courses. Yet, we have an enormous responsibility to bear, and in our efforts to develop your latent talents a certain amount of discipline must be brought to bear. You should feel free at any time to come to any of us and express yourself without fear or equivocation in a friendly and courteous manner. A true gentleman needs only self-limitations upon his actions, for he will be guided by rules of conduct which will allow him a free form of expression without wilfully hurting the feelings of others.

One primary function of the Dean's Office is to help you and the older students, designated as the faculty. We shall attempt in every way to perform our tasks satisfactorily, and in a manner that will tend to make your life agreeable and profitable. However, we are but fellow students, and you can help us a great deal, too. It is only that we are more experienced and perhaps possess more of the type of knowledge which you desire to acquire.

If I were you, I would develop myself along three lines—each of which should converge toward the others and finally be as one. I refer to what is commonly known as intellec-

*Address delivered at the Opening Exercises of the School of Medicine, University of Texas, Galveston, Oct. 2, 1939.

tual, physical, and spiritual attainments. We should be such a composite of the three that the development of one should not unduly overshadow the others. True harmony and perfect development result from a blending of the three in uniform proportion. However, it is true at times that we must emphasize one more than the other, but a continuous attention throughout life will enable us to balance them.

You will think that we are concerned only with your intellectual development unless you look sharply for other possibilities. I would invite your attention to the fact that there is much aside from the courses themselves. Observe your teachers closely. You will oftentimes learn more from studying them than you will from perusing a book or listening to a lecture. Learn not only from the formal teaching of your older fellow students, the faculty; but address yourselves particularly to the thought that they, as personalities, have a great deal to offer you. Moreover, do not forget that you can make contributions to your teachers.

I want to emphasize again that we are but fellow students laboring in a common cause, and that this labor will be pursued even unto death. How soon that final call will come for some of us nobody knows. The war clouds have again darkened the world, and it is within the realm of possibility that we may be called upon to make the supreme sacrifice before our normal allotment of years has run out. If that is decreed, let us remember that life is but transient and fleeting anyway—that a few, good, short years are far better than many spent in dreary, unprofitable existence.

For most of you the studies here will undoubtedly be harder than you have encountered elsewhere. You may be called upon to devise better methods of study for yourself or else to utilize those which others have employed with success and honor to themselves. Keep alert. Learn to study efficiently, for it will be a tremendous asset to you in the coming years. Remember not only that your studies in the medical school are extremely important but that you must be a student always. With rare exceptions, lectures will not be available to you after you secure your doctorate in medicine. Rather will you be called upon to read books and journals, to confer with your colleagues, to use your own powers of observation, and to record your findings accurately in order to pursue further your medical education. Therefore, in the school of medicine do not apply yourself merely to methods which will cause you to pass our examinations. Rather would I think of your looking at medical education from a broad standpoint and learning to gather material and digest information from various sources and by such methods as you will be called upon to utilize in later life.

It is true that your physical development will have been attained in a general sense by this time, but as in the intellectual field, you will again be confronted by a constant process of education for the remainder of your life. Medical studies require that you learn certain manipulations in the laboratories and in the clinics which will require physical training of a high and intricate degree. You have but to witness the surgeon perform a delicate operation. He is keyed to a physical pitch rarely attained in athletics. His whole body, the very fiber of his being, must be controlled and coördinated thoroughly. And not only is the surgeon an exponent of exquisite physical development. Many laboratory techniques and other types of examinations, which you will learn, require a very high type of physical training.

As a part of your physical education you should ascertain how to safeguard your own health. Overexercise is distinctly harmful, but a normal amount is highly desirable. Not all of you should pursue the same physical activities, and one of the most important things that we can do for you I believe is to check your health and instruct you in such matters. You will become a better physician to yourself and for your patients. He who knows how to preserve his own health should be better able to safeguard that of others.

Not only are certain organic diseases, notably tuberculosis, all too frequent among our students, but there are unnecessary mental illnesses, too. You must discipline yourself to banish unreasonable fears and worries. Come to us early with your perplexing problems and let us help you with their solution.

It is our desire to establish a first-rate health service for your physical welfare as well as to teach you to perform similar services for others. I believe that the upperclassmen are familiar with the desirability of this, and the problem should be given serious consideration by the student body. Later, you will be asked for an expression of your opinion concerning this very vital matter.

Although I have elected to speak of spiritual values last, it is only to emphasize them. A university is commonly defined as an aggregation of scholars. To that, let me add that our university medical school is an aggregation of scholars and gentlemen; or—if you prefer — simply, scholarly gentlemen. Little do our intellectual developments and physical attainments matter unless we recog-

nize and practice those higher things of life which are known as spiritual. I do not mean any set creed, philosophy, or type of religion. Rather would I have you think of those subtle qualities which govern our actions and which spring from our innermost being. It is better to suffer much in this world rather than to lose one's own self. There must be compassion for our fellow beings, and we should strive at all times to benefit them. But it is not always possible to please everybody, and then one must have fortitude and courage to accomplish those things which seem best for the most people. In trying hours of disappointment do not allow discouragement to weigh you down. Do not let dark visions or acts of betrayal cause you to become embittered. There is always "a silver lining" to the clouds. None of us is perfect. We are all fellow students and human beings. By developing ourselves properly we may greatly aid our fellow men. Let our spiritual powers so increase as we go onward that we can joyfully lend a helping hand to all. There is great happiness to be derived from serving others. Let service ever be your motto. Strive onward to the end of this life, ever educating yourself to do greater and nobler deeds. The Faculty will be ready to help you and to receive your aid. We medical students have joined hands in a great cause. Through mutual and harmonious development of intellectual, physical, and spiritual powers success will crown our efforts. We shall find a great peace and happiness in having served well our fellow men and in having been true to ourselves.

ANEMIA REQUIRES FREQUENT TREATMENTS

The majority of patients with pernicious anemia cannot be satisfactorily treated by injections of liver extract at long intervals even if massive amounts are given, Maurice B. Strauss, M. D., and Frederick J. Pohle, M. D., Boston, assert in *The Journal of the American Medical Association* for April 6.

From their study of fifteen patients who required relatively little liver extract, they conclude that relapse is possible in as short a time as two months after liver treatment is omitted. Twelve of the patients had relapses within a period of ten months after its discontinuance.

"The optimum interval between injections for most patients with pernicious anemia is from one to four weeks," they declare.

ADULT HUMAN PULSE RATE IS VARIABLE

"The adult human pulse rate is considerably more variable than many persons think," *Hygeia, The Health Magazine* declares.

"Extensive and exact studies of the measurement of the heart rate of persons in New York City have shown pulse rates ranging from 55 to 120 beats per minute in a healthy person in a normal twenty-four hour cycle."

A STUDY OF HYPOPYON ULCER OF THE CORNEA*

BEN B. HUTCHINSON, M. D.
LUBBOCK, TEXAS

The purpose of this paper is to review the none too abundant literature on the subject, concerning one of the most serious conditions met with in the practice of ophthalmology. Hypopyon ulcer of the cornea, pneumococcic ulcer or serpiginous ulcer has been very pertinently defined as, "A deep form of suppurative keratitis caused by a corneal injury plus pneumococcic infection, and characterized by a stormy course with resulting visual defects and at times even loss of the involved eye."

Etiology.—Among predisposing causes of serpiginous ulcer the following may be enumerated: (1) An individual past 40 years of age; (2) undernourishment or malnutrition, especially when associated with alcoholism; (3) chronic dacryocystitis with regurgitation of pus into the conjunctival sac; (4) various forms of chronic conjunctivitis, including trachoma; (5) trichiasis; (6) chronic glaucoma; (7) herpes of the cornea; (8) any abrasion of the cornea; (9) measles, smallpox, and scarlet fever in children are at times precursors of serpiginous ulcers.

The direct cause of serpiginous ulcer is any agent that causes a discontinuity in the corneal surface followed by a pneumococcic infection. Pneumococci are present in the normal conjunctival sac in as many as 15 per cent of cases, but an injury to the corneal epithelium and Bowman's membrane in the presence of these organisms is always likely to develop into a serpiginous ulcer.

Diagnosis.—Classical symptoms of serpiginous ulcer are not usually present the first few days following an injury, but in the presence of pneumococcic infection they begin to develop by the third or fourth day, and by the end of a week the picture is typical. There is excruciating pain in and around the affected eye, due to the accompanying iridocyclitis. There is photophobia, lacrymation and impairment of vision. There is chemosis and injection of both the conjunctival and ciliary vessels. The entire cornea is hazy and the iris appears dull. The cornea presents an ulcerated area which may vary in size and location, but is usually more or less central. The ulcer has a gray, sloughing center with an overhanging advancing border that is more yellowish in color. The anterior chamber contains a hypopyon of greater or lesser extent, which is usually best seen with the patient in the upright position.

*Read before the Section on Eye, Ear, Nose and Throat, State Medical Association of Texas, San Antonio, May 9, 1939.

The course of the ulceration itself can be gauged by staining it daily and noting its progress or recession as compared to the previous day. In fact in very severe ulcers one can often note progression from hour to hour. The ulcer progresses in irregular, serpentine fashion in the direction of the undermined, yellowish edge as the following edge tends to heal; thence the name serpiginous ulcer. As it progresses it increases in depth, at times to the extent of forming an abscess in the deeper corneal stroma, which may reach Descemet's membrane or even perforate into the anterior chamber. As the ulcer progresses the hypopyon increases in size and amount of fibrin and may extend to occupy one-half or more of the anterior chamber; and also with progression of the ulcer the severity of the iridocyclitis becomes more marked.

In the course of this condition the following complications and sequelae may develop: decemetocle, prolapse of the iris, and even of the lens, the formation of anterior or posterior synechia with secondary glaucoma, ectasia of the cornea with resulting staphyloma, perforation of the cornea with persistent fistula, panophthalmitis or phthisis bulbi and cataract may result either from direct injury or secondary to the iridocyclitis.

Prognosis.—The prognosis is poor, at best, as far as visual acuity is concerned because the ulcer usually at some time in its course occupies the central portion of the cornea, and healing results in facet formation or opacity from cicatricial tissue. Many times these ulcers perforate in spite of all treatment, with more or less deleterious results.

Treatment.—Concerning the treatment of serpiginous ulcer there are several phases to be considered—the prophylaxis, the treatment of the general condition, the local treatment, and the management of complications. The prophylaxis of serpiginous ulcer is most important, as it has been estimated that 80 per cent of such cases could be prevented by proper care of foreign bodies in the cornea and the successful treatment of chronic conjunctivitis and chronic dacryocystitis. In the latter condition one is not justified in temporizing but the lacrymal sac should be promptly removed, especially in older persons when irrigation and probing do not give an early favorable response. Foreign bodies in the cornea should be removed as soon as possible after they are acquired, and this should be done not only with aseptic and antiseptic precautions but also thoroughly and completely. There should be no pain persisting twenty-four hours after the removal, as the superficial wound caused by the removal should heal and be covered by epithelium in this period of time. When pain persists it indicates either retention of some foreign material or recurrent erosion of the cornea, which is rare or the beginning of an infection. All patients who have had corneal foreign bodies removed should report for observation the following day, and if such were the case many of these ulcers could be caught in their incipiency and early treatment instituted. All ocular injuries, regardless of how trivial they seem, should receive prompt and adequate attention and should be treated as if each one is the antecedent of a more serious condition.

Regarding the patient's general condition one should investigate the teeth, tonsils, sinuses, and so forth, as possible foci of infection and treat them according to the findings. Malnutrition and undernourishment should be corrected if present, and it is advisable that a high vitamin intake be maintained as it often has a beneficial effect on ulcers of the cornea.

The primary object in the treatment of corneal ulcers is to conserve the vision as much as possible, maintain the comfort of the patient, and help him to return to his work as soon as possible. We must use every agent at our command and act promptly and often radically to avoid disaster. The patient should be hospitalized, kept in bed, given a good diet with adequate fluids, and afforded free elimination. The following outline of treatment is taken chiefly from Gifford.

If the patient is seen early in the course of the disease the ulcer should be cauterized with 50 per cent trichloracetic acid and repeated at one or two day intervals for several times. We must not, however, overestimate the value of local curative procedures in the treatment of corneal ulcers as the diffusion mechanism of the body acting through the cornea plays an important role in the healing of the condition. The pupil should be kept widely dilated, because of the associated iridocyclitis, by the use of atropine instillations three times daily. The intraocular tension should be closely watched and if found to be increased by the atropine it is best controlled by paracentesis, while the use of atropine is continued to combat the iridocyclitis. Radiant heat or hot fomentations should be used for thirty minutes, every two hours. Some have advocated the use of the Shahan thermophore at 145°, applied for one minute daily in early cases. Nonspecific foreign protein should be used early and repeated daily or on alternate days as necessary. This may be in the form of boiled whole milk given intramuscularly, or typhoid vaccine intra-

venously. It is desirable to produce a temperature reaction of 101° or 102° F., and if this is not obtained the next dosage should be increased sufficiently to produce this reaction. When bacteriologic study from the ulcer reveals the presence of pneumococci, Gifford advises the use of optochin; however, this has been discarded by many as rather ineffective. Gradle has advocated the daily application of a paste or mud of mercurochrome to the ulcer, to be left in situ for two or three minutes each time. Dionine is often beneficial in helping to relieve the pain as well as acting as a lymphagogue by increasing congestion. Unless there is considerable amount of discharge from the eye the patient is usually kept more comfortable with a fairly firm pressure dressing.

If the ulcer is progressing as noted by an increase in its size or an increase in the amount of hypopyon or more pain and congestion and the pupil does not dilate sufficiently, Gifford and Gradle advise doing a delimiting keratotomy on the principle that the hypotomy produced relieves the pressure on the cornea, resulting in an increase in the supply of lymph and fresh antibodies from the limbus to the ulcerated area. This wound is to be reopened twice daily for several days or until the ulcer shows signs of regression. The only time delimiting keratotomy is contraindicated is when the ulcer has progressed to involve the central portion and a large part of the periphery of the cornea. If it is performed in these cases there is danger of a prolapse of the iris. In such cases puncture in the center of the ulcer with the actual cautery is more desirable. When delimiting keratotomy is possible, however, they prefer it to cauterization because of the dense scar that results from the cautery. Before doing keratotomy the pupil is to be dilated maximally, and in the presence of a suppuration of the tear sac the sac should be removed first. The keratotomy may be done under gas or local anesthesia but if the latter is preferred the patient should have an ample preoperative dose of morphine because of the pain incurred at the time the chamber is opened. A keratotomy is much easier to reopen and there is less danger of iris prolapse from this than from paracentesis at the limbus. When it is determined that a case of serpiginous ulcer is not making suitable progress with the usual treatment, the earlier delimiting keratotomy is performed the better the final result will be.

Other agents that have been advocated from time to time in the treatment of serpiginous ulcer include: specific antipneumococcic sera, autogenous vaccine, sterilization by different forms of heat and ultraviolet light as well as artificial fever, various drugs applied locally, the application of medicaments to be held in contact with the ulcer by a contact glass which also eliminates friction and retains the body heat and moisture, administrations of insulin, salicylates, and other drugs internally. Various surgical procedures aimed at reducing the intraocular tension, and surgery of other parts such as extraction of teeth, tonsillectomy, and operations aimed at drainage of the nasal accessory sinuses have at times been advocated.

Among the newer suggestions are the topical application of pneumococcic bacteriophage, which is not available for general use and the results of which have not been adequately confirmed. I understand that experiments with the local use of solutions of sulfapyridine are being carried on at the present time by a group in the East. This work was inspired by the excellent results obtained by the use of this drug in pneumonia by Bullova at the Harlem Hospital in New York City, and many others.

In considering the management of the complications of serpiginous ulcer I will merely mention the following procedures: The formation of iris synechia can be prohibited to some extent by keeping the pupil widely dilated; in decemetocle a firm pressure bandage is used and possibly a change from the use of atropine to eserine is made. In instances of prolapsed iris, if very small it can be left alone, if large it must be excised. In cases of persistent fistula, a conjunctival flap should be resorted to. In leukoma one may use dionine, heat, and massage of the cornea with yellow oxide of mercury ointment. In large staphyloma, phthisis bulbi or panophthalmitis the only recourse is enucleation.

CONCLUSIONS

The incidence of serpiginous ulcer, which is often one of the most stubborn conditions we encounter in ophthalmology, could be greatly reduced if we could educate the public to consult the ophthalmologist immediately after any injury to the eye, no matter how trivial. After the onset of serpiginous ulcer, treatment should be instituted immediately and carried out vigorously and often radically to preserve as much vision as possible and many times even to save the globe.

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ABSTRACT OF DISCUSSION

Dr. Herbert Donnell, Waxahachie: In an interesting and instructive manner Dr. Hutchinson has covered the difficult subject of hypopyon ulcer. He has properly stressed what is the most important treatment of any disease, prophylaxis. The importance of having cases of small corneal injuries return for observation can not be overemphasized.

It has long been a practice with me to instill some form of zinc after foreign bodies have been removed. I have felt that this had some effect in preventing a pneumococcic infection. Although some competent ophthalmologists advocate the use of irritating antiseptics as a prophylactic, I feel that they should be avoided.

In the *Pennsylvania Medical Journal* for August, 1938, Kutscher described his use of sodium hypochlorite (1:5,000 solution) in corneal injuries. He claimed that the pain and inflammation were markedly relieved after the hypochlorite had been instilled at two hour intervals for three or four times. He thinks that it also lessens the incidence of pneumococcic infection. Lately I have used hypochlorite both in injuries and as an adjunct to sulfanilamide in trachomatous ulcers. I purposely used no other drug and have found that the pain and inflammation were reduced.

In severe injuries and where infection has become established, I use intravenous typhoid injections. I think that a temperature of 104° or 104.5° F. is much more beneficial than lower degrees. The dose is usually increased until this elevation is reached. There is danger in the intravenous use of typhoid bacilli. However, if one keeps in mind that the chief danger is from cerebral edema, and that this may be combated by the intravenous administration of 50 per cent glucose and by spinal puncture and drainage, one may induce the hyperpyrexia desired without feeling that his patient is unduly endangered.

Ampoules Mercuric Salicylate 0.065 Gm. (1 grain), 1 cc.—Each cubic centimeter contains mercuric salicylate (New and Nonofficial Remedies, 1939, p. 319) 0.065 Gm. (1 grain) and quinine and urea hydrochloride 0.02 Gm. (⅓ grain) suspended in a sweet almond oil and lanum base. Upjohn Company, Kalamazoo, Mich.

THE EXPANDING FIELD OF PUBLIC HEALTH ACTIVITIES*

J. N. BAKER, M. D.
(State Health Officer of Alabama)
MONTGOMERY, ALABAMA

Did not the forbidding time factor preclude, it would be tempting indeed to sketch the story—a most fascinating story—of mankind's struggles, since civilization's early dawn, in his tedious upward climb in quest of a greater security against the forces of environment which perpetually threaten life and health. Disease has been man's constant companion since he departed from the nomadic type of living, developed trade routes, and established the community form of living. It is interesting to note, from the earliest records of some 10,000 B. C. to 7,000 B. C., the close relationship then existing—and for centuries to follow—between primitive medicine and primitive religion; for in the religious codes is to be found practically all that was known or taught regarding sanitation and hygiene, and the clergy or priests were the health teachers. Violation of health laws such as those relating to water supplies and the disposal of human excreta was an offense against the gods and therefore a sin, punishable through religious codes, as contrasted with our present-day practices of civil procedures. Fetishism and superstition ran rampant, and disease was universally viewed as a visitation of the gods, to be appeased only through prayer, sacrifice, and moral reform. It was the Greeks who first gave to civilization the imperishable thought that the universe is ruled by natural laws and that man must study these laws and strive to live in harmony with them if he wishes to be well and happy.

The revered father of the Hippocratic oath said: "Diseases are not the work of God or demon; if man neglects Nature's laws he suffers." In truth, the rules he laid down for healthful living are much those of modern preventive medicine. However, many centuries were to elapse—centuries embracing the horrible and decimating experiences of the Dark Ages carrying with them their hideous epidemics of bubonic plague, cholera, and smallpox—before even a rift was made in the veil enshrouding Nature's hidden secrets as to the cause of those pestilential scourges. The first telling wedge into this dark and unexplored field was driven home by Pasteur during the middle of the century just behind us when, after long years of patient research, he proclaimed the germ theory of disease, saying, "It is within the

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power of man to rid himself of every parasitic disease." The era of the "scientific approach" to the cause and mastery of disease had arrived, and empiricism, theorising, and guess-work were on their way out. Following fast upon the heels of Pasteur came Lister, Koch, Klebs, Loeffler, Budd, Von Behring, Ross, Reed, Carrell, Lazear, Gorgas, and scores of others bent on converting a vast treasure house of new, life-giving knowledge in all fields of medicine to man's betterment. With the advent of this volume of new knowledge, the prevention of disease took on a new meaning—particularly the prevention of disease in the mass—followed logically by the creation of a new medical specialty, public health, and by the organization within society of the machinery necessary for the accomplishment of the ends sought. It should be noted at this point that, while the modern public health structure, because of the manifold activities in which, of necessity, it must engage, reaches out into kindred professions—particularly those of engineering and nursing—the roots from which all such performances stem are those of scientific medicine. For this reason it is that the guiding hand of every modern official health department should be one grounded in the medical sciences. So axiomatic does this appear to be as to admit of small argument; and yet, not a few governmental agencies, in setting up health structures, have been prone to ignore this sound basic principle and not infrequently with ultimate unhappy consequences. This principle, important from the very inception of organized public health work, seems all the more important today as the lines of preventive and curative medicine, as applied to society and to the individual, converge more and more and the differences in the shades of meaning between prevention and cure grow dimmer and dimmer. The one should now be thought of as being complementary to the other, as the office of the private practitioneer assumes more and more the role, as it should, of a miniature "health centre." One needs to recall that because of the prodigiously rapid strides which have been made by modern scientific medicine, we of today are witnessing and are forced to be participants in precipitous changes which are now going on not only in society but also within the organic structure of medicine itself. One conspicuous example of such change is the existence of many and growing subdivisions into specialties within our ranks, making the delivery of modern scientific medical care both more complex and more costly. However, this should not mean—and let us hope, does not mean—the passing or even the relegation to obscurity of the time-honored family physician or, more properly, medical adviser whose importance to the family in the field of preventive services should steadily enhance. He must still be viewed as society's most important single factor in "the first line of defense" against disease and particularly at this time when the need seems great and the demand urgent for widening the scope of health protection into fields hitherto given but scant consideration.

In such expansion the specialty of public health—always to be viewed as a direct offshoot and an integral part of medicine—will, of necessity, assume an increasingly important role. During the last decade of the past century and the first decade of the present century many of the major functions of this specialty centered around activities which necessitated frequent invocation of the police powers vested in such departments in order to safeguard adequately the public health. Cumbersome and hampering quarantines against yellow fever, typhoid fever, smallpox, and other pestilential diseases and the abatement of nuisances and garbage control constituted the order of the day; and for the performance of such duties, other than for the medical officer in charge, training in law enforcement rather than in scientific principles constituted the necessary essentials of the personnel employed. Before science definitely pointed the way for intelligent control, through discovery of the cause and origin of many of these scourges to mankind, the only weapons available were the groping and clumsy practices springing from empiricism and improvisation. Outstanding examples of such haphazard methods of control are to be had in the approaches made against typhoid, malaria, and yellow fevers; tuberculosis; diphtheria; bubonic plague; and many others. And yet, when the records of this prescientific era are scrutinized, one is forced to marvel at the wisdom and fine discriminating judgment, based largely on critical observation and lucid reasoning, displayed by these pioneers in the public health field. A century and quarter ago, Thomas Paine, although himself not a physician, contributed an elaborate treatise on "The Causes of the Yellow Fever in New York City," which, today, would do credit to any epidemiologist, and in which, by indirect implication, he incriminates the mosquito without calling it by name.

Once the exact nature of these foes to mankind had been definitely charted by science, little time was lost in the practical application of the resulting facts to the betterment and improvement of human life in the mass. Thus, in a comparatively short time, we have

seen many death-dealing diseases completely or partially mastered through the application of exact principles of sanitation to man's environment. Because of climatic and soil conditions, most southern states have had to struggle with more natural enemies to mankind arising from environmental conditions than have our sister states to the north and east. This is reflected in our higher morbidity and mortality rates for such diseases as malaria, pellagra, and hookworm, but, in a measure, being compensated for by a lower rate for such diseases as penumonia and scarlet fever. Even in these tropical or subtropical diseases to be found in this area, steady and satisfactory progress is being made in their control although they are far from being completely eradicated. A lasting and satisfying answer can be had only through adequate programs of environmental sanitation for our vast rural stretches; but these, too, can be conquered through education, toil, and the wise expenditure of public funds. There cannot yet be relaxation of vigilance on these fronts. However, over and above these basic problems in public health, we cannot ignore the more modern concepts and advances now being made in the whole field of preventive medicine.

Today, one must visualize "environmental control" as meaning something more than assurance of safety regarding water supplies, milk supplies, sewage disposal, and the quarantining of the acute contagious infections. General living conditions, as these relate to the family unit in the urban or rural home, its food supply, air conditioning, and sleeping quarters; to the environmental conditions of the worker in the factory, the mines and office — these present problems of the first magnitude in the hygiene of housing, in slum clearance, in nutrition, and in industrial hygiene, which neither the profession of medicine nor official health workers can afford to ignore complacently. While basically the solution of these problems may fall within the domain of sociology and economics, one cannot lose sight of the fact that medicine —modern scientific medicine—is, after all, a *social science*, whose knowledge and guidance must be intelligently and generously applied to whatever difficulties may arise within our social structure. If this premise be granted, forthwith one sees looming on the horizon other tremendously important problems of more immediate concern to the medical profession than those arising directly from man's physical environment. Most urgent amongst these are better control programs for the venereal diseases, cancer, pneumonia, tuberculosis, and the mental diseases.

None of these problems is new. They have long been in our midst and of their seriousness the practicing physician is fully aware. It is upon these salients, in the fields of prevention and control, that the serious attention of the medical profession and of health workers must now be focused; society, neither financially nor biologically can indefinitely withstand the mounting loads now being heaped upon it without having violence done to its essential parts. Is it not time that greater consideration was given to the role played by syphilis, and its damaging end results to the nervous system, in crowding our jails, our almshouses, and our mental institutions? A telling blow, struck earlier through education and adequate treatment, should be able to curb many of these costly and frightful end results. In like manner, many of the problems arising in the realm of mental health, both in the child and in the adult, can, if taken in time, be satisfactorily adjusted, and, in this way, obviate much future suffering, institutional care, and consequent financial loss to the State. Tax moneys spent in the financing of preventive programs in such important fields as these should be viewed in the light of good business and of sound investment rather than of reckless expenditure of public funds. But the path must be blazed and the leadership furnished by those who know and understand—the trained physicians.

While it is true that the health problems falling within this category embrace diseases for the proper management of which the best expert talent from their respective medical specialties will be required, their public health implications can hardly be denied. Intimately associated with the control of these diseases is the very important and even more complex problem of providing, where found to be needed, better medical and hospital care for the necessitous and the medically necessitous. In his own State of Alabama the writer feels this need for better medical and particularly hospital care—both general and for the tuberculous—for the groups mentioned above is a most pressing one and by no means, as yet, satisfactorily met. Our failure to do so rests largely upon an economic basis and seemingly presents financial problems quite beyond the resources of many of our local governmental agencies in the state to solve, without extraneous aid. The National Health Act of 1939, recently introduced into the Federal Congress, seeks to provide grants-in-aid to states for the purpose of assisting in the solution of these problems with which states, counties, and municipalities alone cannot adequately cope. If the suggested plans of administering such grants through health agencies at state level become operative, one

fact stands forth crystal-clear—there must be full utilization made of the trained scientific talent of the practicing medical profession as well as complete understanding and harmonious working relations between this body and the medical officers of health who may be chosen to direct and administer the medical aspects of the programs evolved.

Expansions into these newer and, as yet, poorly explored fields of health services constitute the immediate problems which society has posed. That their ultimate fate hinges largely upon the type of leadership and guidance afforded through the two professional groups most intimately involved—that of medicine and of public health—no one can seriously question.

ABSTRACT OF DISCUSSION

Dr. George W. Cox, Austin: I want to compliment and thank Dr. Baker on his splendid presentation of the trends in public health and re-emphasize, as he has in his paper, that the public health movement should be under the direction of the medical profession.

In 1879, the State Board of Health was appointed by the Alabama Medical Association, and they appointed the State Health Officer. Our first State Health Officer was appointed the same year. Texas decided to go another route, and the Governor was given the power to appoint the Health Officer, until in 1927 the State Board of Health was formed, with members appointed by the Governor, this method being much more satisfactory than direct appointment by the Governor. Under the Alabama Medical Association there have been but four State Health Officers, our speaker today being the fourth. Those preceding Dr. Baker terminated their duties as State Health Officers in death. With this continuity of service, Alabama's public health work has forged steadily ahead. Today every county has a health unit, every health officer full time, an organization capable of handling any phase of public health work, and a per capita appropriation three times that of Texas.

Public health is expanding from the narrow programs carried on in the past, concerned with environmental control, into a broader program, concerned with the removal of health and mental hazards from man's environment and the promotion of better adaptation to our present-day mode of living. To maintain eleemosynary institutions and to provide for their enlargement, Texas is spending approximately six million dollars of tax money a year. Much of this amount could be saved, if we were able to expand our mental hygiene program to include the early supervision of the prospective institutional cases. It has been estimated that 45 per cent of those entering mental hospitals are suffering from a mental state that could have been prevented. This part of the public health program is being sadly neglected, not only in Texas, but throughout the entire United States. I believe that legislators and economists who wish to cut the cost of government would do well to investigate this phase of public health and invest a small portion of money which the eleemosynary institutions now cost in preventing the occurrence of mental illness.

There is a distinct line of demarcation between the private practice of medicine and the practice of public health. It is useless for me to attempt to explain where the one stops and the other begins. In Texas we have always worked in close harmony with the medical profession—those in public health appreciating the private practitioner's rights and privileges—and as a result we have always had cooperation for our public health programs locally. This situation is as it should be, and I am sure that each year finds these two groups working in closer harmony on programs of health. Such has been my experience.

Public health in the past has lagged behind the discoveries of the medical profession. The work of the great men mentioned by Dr. Baker has laid down many of the principles which we in public health work have followed. It is from them we have learned how to prevent and control disease on a mass basis. As our population becomes more urban, the degree with which we must be ever alert is increasing.

Physicians have known for years how to prevent and control disease. However, those in charge of public health work were unable to put these discoveries into practice, due to the lack of funds; consequently, it was not until the present national administration was inducted into office that it was possible to put some of these theories into practice. We have come a long way in Texas since 1879, when our first State Health Officer was appointed. At that time the requirements of a health officer were that he be familiar with smallpox and yellow fever, and his duties were those of a quarantine officer. This program gradually expanded through the years until the State Department of Health developed a skeleton organization with which it was impossible to do everything needed. With the advent of assistance through the Social Security Act, our work has expanded by the addition of the divisions of Public Health Education, Tuberculosis Control, Venereal Disease Control, Malaria Investigations, Industrial Hygiene, and an increase in the work of Maternal and Child Health and Sanitary Engineering. With this added impetus, together with the formation of six District Health Units, and later, with a grant from the Federal Government for Venereal Disease Control Work, we have been able to meet our problems more successfully. However, with the enlightenment of the public as to what they might expect from public health work, have come demands which we cannot readily meet at this time. I feel that the citizens of our state know more about the protection that public health workers can give and that money will eventually be provided to take care of the future expansion of public health, not only in Texas but in the entire United States.

ORGANIZED VOLUNTEER BLOOD DONORS

Volunteer blood donor organizations, with a total membership close to 98,000, now serve fifty-six communities throughout the country, as the result of the influence of an organization which began in Rochester, N. Y., only three years ago, Arthur John Collinson, Rochester, points out in the March issue of *Hygeia, The Health Magazine.*

Known as the Legion of Blood Donors, the Rochester association up to January 1940 had contributed more than 970 transfusions, given without pay from anonymous donors. The Legion owes much of its effectiveness to the simple way in which it is run and the speed with which requests for blood are answered. Volunteers get in touch with the *Times-Union* newspaper, which coöperated with a radio broadcaster in founding the organization. Arrangements are made to have the volunteers' blood typed into one of the four classifications at a local hospital. With over 1,200 names on file, the Legion loses little time in finding a proper donor. Often a general appeal is made in a radio announcement.

Radio stations have coöperated in sponsoring the plan in other cities.

NEW DEVELOPMENTS IN CRIPPLED CHILDREN'S WORK*

J. J. BROWN†
AUSTIN, TEXAS

Many well informed people thought when President Roosevelt signed the Social Security Act on August 14, 1935, that the problem of obtaining proper treatment for crippled children was forever solved. They were, however, placing a very narrow interpretation upon the term "treatment," for the problem had not been solved, it has not been solved, and it will not be solved unless the efforts of well informed and intelligent people of this nation are continued.

The Social Security Act of 1935 was indeed a great advancement, for it made provision for the various states of the Union to receive monetary assistance in treating crippled children in need of care. When the Act was passed, only twelve states had programs of service. At present, forty-seven of the forty-eight states and Alaska, Hawaii, and the District of Columbia have well established programs for carrying out the broad provisions of the Act.

The newest conception of the problem of treating crippled children is far different from that which was generally accepted in former years. Years ago, in speaking of the treatment of crippled children, only surgical and medical care were thought of. Today, the term implies many other services. In this connection, I might well quote from an address made on November 23, 1938, by Dr. R. C. Hood, Director of the Crippled Children's Division of the United States Children's Bureau, at a meeting of the National Vocational Rehabilitation Association in Miami, Florida. Dr. Hood said, "The crippled children's services include case findings, diagnostic services, medical or surgical treatment and appliances where needed, and the meeting of convalescent and after-care needs." Dr. Hood, in giving his conception of what is implied in a crippled children's program, was very likely voicing the opinions of the directors of the programs for crippled children in the various states of the Union.

All directors of state programs are in agreement that every state should make provision for finding, diagnosing and providing medical or surgical treatment and appliances where indicated, and that meeting convalescent and after-care needs and an adequate program of prevention are vital parts of every state's work for crippled children. In other words, the term "treatment" of crippled children has been broadened to mean a complete service for them. It does not begin with the child's entering the hospital, nor is it completed when he is discharged by the attending surgeon. Rather, it begins with prevention of all conditions which might lead to crippling. It carries this program of prevention into the home, the school, the highway and all walks of everyday life. The objective is to decrease the number of children who, through various reasons, are annually thrown into that list classified as cripples.

From the field of prevention the program must immediately follow to early diagnosis, for this is, from one standpoint, a part of a prevention program. And from early diagnosis, the program must necessarily lead to treatment, for of what avail would a diagnostic program be if treatment could not be given?

And from treatment, which may cover all hospitalization, medical and surgical services, we are forced to go into the field of vocational guidance and special education for it would be criminal and uneconomical to desert the crippled child who is only partially restored to a physically normal state, but helpless from the standpoint of education and vocational training. If this part of the program were not carried through, it would be as though we led a child through a wintry storm but left him a victim of the elements when he was only halfway home.

Though it is evident that the program must begin with the babe and carry through to early manhood or to that stage in life where one may hope to be or to become a self-supporting individual, this is a new conception. This is the idea of what constitutes a crippled children's program. This is the work which is being done today in forty-seven states of the Union, Hawaii, Alaska and the District of Columbia. Moreover it is the program which is being carried forward in Texas.

It has been stated that Texas is rendering a complete service to crippled children, beginning with prevention and ending with vocational guidance, special education, and placement in employment. Let us therefore briefly consider each of these various phases of the state's work.

PREVENTION

The Children's Bureau of the United States Department of Labor has found that the principal cause of crippling in children is infantile paralysis. They have said that this disease accounts for from one-fifth to one-fourth of the total number of crippled children. The other major causes in the order of the number of children affected, are congenital defects, birth injuries, osteomyelitis

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†Director, Crippled Children's Division of the State Department of Education, Austin, Texas.

and bone and joint tuberculosis. The condition has been found to prevail throughout the nation, and it exists in Texas. It is a striking fact that for all the crippling conditions named except certain congenital defects, the causes of the crippled conditions which result are to some extent preventable. This fact should be considered and reconsidered in launching a prevention program.

One of the vital questions immediately arising in undertaking a prevention program is to determine the causes of crippling and then to eliminate them so far as is possible. To reiterate, all of the conditions and causes which lead to crippling, with the exception of certain congenital defects, are preventable. The heart of the prevention program, then, is to remove the causal conditions.

After determining the causes of crippling which may be eliminated, a second vital part of a preventive program is to make a complete survey of all individuals, agencies and organizations which might assist in removing the causes which have been determined.

The medical profession can no doubt render the greatest service in a national and state program of prevention of crippling. This is true for many reasons. First, because of their knowledge of the causes of crippling, they can well see where a program of prevention begins, and, second, because of their knowledge of medicine, surgery and general treatment, they know how these conditions can be corrected. The medical profession is the keystone of any program of prevention.

What are the agencies, individuals and organizations that can help in a program of prevention of crippling? Some of them are health organizations. I have reference here to the State Department of Health and city and county departments. I also have reference to both state and local tuberculosis organizations.

Educational leaders can render a great service in a program of prevention, for there is no profession which comes closer to the daily life of children than the classroom teacher. This profession can make vital contributions to a program of prevention—in the distribution of facts relative to the elimination and control of conditions which lead to crippling.

If a program of prevention is to be successful, it must be well publicized, and there is no more effective means of educating our children in prevention than by going into the schools. We may well learn a lesson in this respect from the State Department of Public Safety. They have shown that safety can be taught in the classrooms. We, as well, can teach the prevention of crippling there.

The nursing profession can render a great service in the state's program of prevention, for the nurses in their daily visitations into the homes of those of low economical status, can easily see conditions which will result in crippled children. They can see these conditions in the initial stages. They form a vital intermediary between the medical profession and the family.

Individual and community effort is important in the prevention of physical defects. Children must be guarded at home. They must be instructed if they are to avoid accidents and injuries. We read every day the statements of doctors that cod liver oil and adequate sunlight would likely prevent rickets in many instances; that the use of pasteurized milk, from cows free from tuberculosis and the protection of children against exposure to active tuberculosis are factors preventing joint and bone tuberculosis; and that the protection of children against injuries and incipient disease by periodical medical supervision in the preschool period is a precaution that will reveal need of treatment at a stage where it can be most effective. Protection against accidents in the home and on the farm and safety campaigns to prevent highway and other accidents will greatly reduce the number of injured and crippled children.

Many other agencies, individuals and organizations that can render services to the state's program of prevention of crippledom could well be named. Due to limited time, however, I have reduced this number to those given above. In summarizing the vital points of the program of prevention, I would first say that the causes of crippling must be determined and eliminated so far as possible; and secondly, through health education all individuals and organizations that can assist in any manner in eliminating these causes should be used to the fullest extent. If this is done, Texas will in future years have fewer crippled children and will, of course, not find it necessary to expend large amounts in their behalf.

CASE FINDING AND DIAGNOSTIC SERVICES

The White House Conference on Child Health and Protection, in 1930, estimated very roughly that there are approximately three crippled children for one thousand population, or 368,000 for the entire nation. Applying this percentage to Texas, this State would have 18,516 crippled children. The registers of thirty-six states, Alaska, and Hawaii, on June 30, 1937, included the names of 99,722 crippled children.

Knowing that we have so many crippled children in our State and Nation, it seems that there would be no reason for having a program which has as its objective the find-

ing and diagnosing of cases. Rather, it appears that the emphasis should be placed upon treatment. This is true. However, a well-planned program must make adequate provision for finding the crippled, for otherwise those living in far-distant points of the State where there are no facilities for obtaining treatment and hospitalization will not be located. They need our help to the greatest extent, and the Social Security Act specifically stated that children living in rural communities are especially to be sought.

In 1930 the federal census showed that 41 per cent of the population of Texas lived in incorporated towns of 2,500 or more population and that 59 per cent lived in rural districts. Obviously provision should be made for locating crippled children living in rural districts. Texas is finding children living in rural districts who are in need of treatment and hospitalization. This is being done through a well-planned program.

The State receives its funds for the assistance of crippled children from the so-called Equalization Bill, which has as its primary objective the equalizing of educational opportunities of the children of this State. As applied to crippled children, it means that children living in rural communities are to be given opportunities of development comparable to those presented those of our towns and cities. This obviously means that a finding program must be a vital part of the work, for otherwise these children will not be reached.

If crippled children were located only by someone who has had no technical training in treating crippled conditions, very little would be accomplished. However, after the children are found, they are given the opportunity of having their disabilities diagnosed by either family physicians or orthopedic surgeons. This constitutes the State's diagnostic service, which is a vital link in the State's program.

The State's diagnostic service is rendered through permanent clinics in the various hospitals which have been approved by the State Board of Health for caring for crippled children and by itinerant clinics which are held in the various population centers of the State, so as to make this service readily accessible to all children. The personnel of the entire service is made up of the surgeons and of the general physicians of Texas to whom the crippled children of this State will forever be indebted.

To the general physician of small communities who has never received compensation for the treatment of crippled children, Texas should feel a debt of gratitude comparable to that felt by the famous Drs. Charles and Will Mayo, of Rochester, Minnesota, when they erected a great monument to their father, who was a "country doctor." They recognized him as a great man who rendered a great service. We should recognize the general physician of Texas as a great man who is rendering a great service to crippled children, especially in the field of diagnostic services.

TREATMENT

If we were to point out any part of the entire program of services to crippled children as being the most important part, or the keystone of the work, we would be forced to place our finger upon treatment, for finding a crippled child and diagnosing his condition would be of no avail if he were not given treatment, and if he could not be trained in a vocation which he might hope to pursue through the years in earning his livelihood. The center of the entire program, then, is treatment.

Treatment may be said, very roughly, to consist of the services rendered by the doctors and by the hospitals. In this brief discussion of this phase of the program, I shall limit myself to these two factors.

All children authorized for treatment by the Crippled Children's Division of the State Department of Education in Texas are sent to orthopedic surgeons and specialists who have been approved by the State Board of Health. This assures the parents of crippled children and the citizenship of the State generally that eligible children are receiving proper treatment.

We have stated that treatment can be pointed out as the most important part of the entire program for crippled children. In making our selection, we might state with an equal degree of veracity that the most important part of a treatment program is made up of the services rendered by doctors, for certainly a crippled child could not be expected to be physically restored by only remaining in a hospital.

We sincerely hope that the approved orthopedic and plastic surgeons of Texas realize the tremendous responsibility which has been placed upon them. The 18,000 or 20,000, or whatever the number may be, of crippled children within our borders, are depending upon them for their physical restoration. Could one visualize a more tremendous responsibility being placed upon any man or group of men? Obviously, the members of this group, in turn, must support the State, for the State has unequivocally placed this problem in their hands and is depending upon their brains for the solution.

At present, there are thirty-three approved

hospitals, and their services constitute the second part of the treatment program.

I have emphasized the responsibility placed upon surgeons who have been designated by the State to care for crippled children. I again would like to remind these surgeons that they have an obligation in maintaining the services of approved hospitals to the highest possible point, for they are the institutions which are caring for the children who have been placed under their care. This is no small task, and we are looking to this group for wholehearted help in this respect.

The office handling crippled children in the State Department of Education prefers that all applications for admission of crippled children be signed by the family physician and city and county health doctors. On each occasion that a physician affixes his signature to an application, he should be mindful of the fact that the parents of the child have also signed the document and, in signing, have given permission for the child to undergo any treatment considered necessary. They are placing the entire destiny of their child, as far as his physical well-being is concerned, in the hands of the medical profession. Again, can one visualize a more tremendous responsibility? We know that the physicians and the surgeons of Texas have rendered and will render the greatest possible service to those children placed under their care and will not betray the confidence of thousands of parents of the crippled children of this State.

I wish it were possible for me to show the innumerable letters of appreciation which have been written to the Department of which I am Director, telling of the physical restoration of an only child or of one of a number of children who has been restored to a condition which will enable him to take his place among the other children of the family. These letters reveal plainly the part of the medical profession in rendering a great service for which the parents of the crippled children of Texas will be forever grateful. And, of course, the crippled children of today will in years to come rise up as one great body and thank the medical profession in Texas for the services which they have rendered. The State will number among its citizens many who are self-respecting and self-supporting, due to the great work which the profession individually and as a body has rendered.

CONVALESCENT AND AFTER-CARE

I have stated that the 1930 census showed that 59 per cent of the population of Texas lived in rural districts where facilities are not available for adequately caring for children after they have been discharged from the hospital. This necessitates an adequate convalescent program.

Every doctor realizes the importance of proper after-care. We have been reminded on many occasions that although a club foot may be corrected by the most skillful surgeon, it may revert to the former condition by improper care after the child's return home. This is equally true of many other deformities or diseases. Therefore, if we were only to send children for surgical correction and retain them in the hospital for weeks or months, then discharge them to a hovel on the plains of West Texas or a shack in the piney woods of the eastern part of our State and not properly follow them up, where would the gain be? That type of program would not only be of little benefit to the crippled children of this State, but it would also be uneconomical.

The after-care program is carried on through the assistance of the State Department of Health and that of its nurses scattered throughout Texas. We should like for surgeons doing crippled children's work to realize that these nurses have rendered a great service to the children who have been and are now under their care. This service has been made possible by the spirit of coöperation shown by Dr. George W. Cox, Director of the State Department of Health, and the entire personnel under his direction. We owe a debt of gratitude to him.

The after-care program must, however, in the final analysis, be carried forward by the staff of the Crippled Children's Division following the directions which the surgeons give. Therefore, it is of vital importance that our Department receive definite information relative to the care to be given after the child's return home.

In our after-care program we have provided a means of convalescent care in homes chosen by the Division of Child Welfare of the State Board of Control. Children are placed in these homes who are in need of prolonged care, yet whose condition does not necessitate constant hospitalization. The homes, of course, must be located readily accessible to the office of the doctor who has charge of the child's treatment. We again ask coöperation in seeing that children who are in need of prolonged treatment, but for whom hospitalization is not imperative, are removed to convalescent homes. We also ask help in seeing that these children are properly cared for in these homes and that they are returned to their parents as soon as the maximum benefit of this type of program has been obtained.

We could place much more emphasis upon the after-care program in Texas, but due to

the limitation of time, I shall now discuss vocational guidance and training.

VOCATIONAL GUIDANCE AND TRAINING

As Director of the crippled children's work and the State Vocational Rehabilitation Program, I wish to comment upon the relationship of the Vocational Rehabilitation Program to the physical restoration services for crippled children. Each service deeply affects the lives and future happiness of individuals; it is of serious import to many crippled persons that we examine the intertwining of these two nation-wide programs with a view to the best coördination that can be achieved. The Vocational Rehabilitation and the Crippled Children's programs are concerned constantly in reaching the same goal —the restoration to health and happiness of the physically handicapped of this State and Nation.

The crippled children's program seeks to restore children to a physically whole condition. The vocational rehabilitation program seeks to restore those who, because of a physical handicap, cannot continue in their old profession or have been unable to adjust themselves to the industrial world of today; to procure employment, and in doing this, to restore them to happiness.

Texas has participated in the nation's program of vocationally rehabilitating physically handicapped persons since 1929. In this program the physically handicapped becomes eligible at the age of sixteen for vocational guidance and training. It is plainly evident, then, that the program for crippled children and vocational rehabilitation must intertwine and coöperate to the greatest extent between the ages of sixteen and twenty-one if the greatest benefit is to be achieved.

It should be very gratifying to the citizenship of Texas to realize that many children who have been physically restored have also been given training and are today becoming self-sustaining and self-supporting citizens of Texas.

CONCLUSION

The newest development throughout the State and Nation in crippled children's work is the conception of rendering a complete service to crippled children, rather than merely admitting them to hospitals and discharging them therefrom, hoping that they will eventually become the type of citizens that we want in this State. This complete program consists of prevention, discovery and diagnosis, treatment and vocational training and placement in employment.

Texas today has a program for crippled children which is reaching from Texarkana to El Paso and from Texline to Brownsville. This program accepts for treatment those of every race and color. It makes provision for the child living in the direst of economical straits. It takes the child from the poverty-stricken home and places him under the care of skilled surgeons.

We cannot help but feel that this accomplishment on the part of Texas surgeons and citizens may well be compared to the driving of the Golden Spike after that great transcontinental railroad, the Union Pacific, was completed. A great feat had been accomplished. Tons of wheat, corn, and produce could be shipped to the distant points of this Nation.

This program, which the medical profession has made possible, will transport to health and happiness crippled children living in all parts of Texas, and our State as a result will be a finer place in which to live.

May I say in closing that we are deeply appreciative of the attitude taken by the State Medical Association all over the State of Texas towards the Crippled Children's Division. We are fully aware of the fact that our work is bordering on socialized medicine; we are fully cognizant of some of the criticism of the Crippled Children's program in the State of Texas. Future plans for the Crippled Children's program in Texas include raising of the hospital standards for the care of crippled children and perhaps a different system of giving part-pay to the surgeons who do the crippled children's work. Future plans include a more stringent scrutiny of every child seeking assistance from the State from the standpoint of whether or not he is a citizen of the State, from the standpoint of the mentality of the child, from the standpoint of the finances of the parents, from the standpoint of the kind of a disability which the child possesses. In other words, we want to handle crippled children whose parents are poor and whose family doctors think we should handle them.

MISCELLANEOUS

COMING MEETINGS AND CLINICS

State Medical Association of Texas, Dallas, May 13-16, 1940. Dr. L. H. Reeves, Fort Worth, President; Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth, Secretary.

American Medical Association, New York City, June 10-14, 1940. Dr. Rock Sleyster, Wauwatosa, Wisconsin, President; Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Southern Medical Association, Louisville, Kentucky, November, 1940. Dr. Arthur T. McCormack, Louisville, Kentucky, President; C. P. Loranz, Empire Building, Birmingham, Alabama, Secretary-Manager.

Texas Allergy Association, Dallas, May 13, 1940. Dr. J. H. Black, Medical Arts Building, Dallas, President; Dr. Boen Swinny, Medical Arts Building, San Antonio, Secretary.

Texas Ophthalmological and Otolaryngological Society, Fort Worth, December, 1940. Dr. J. W. Ward, Greenville, President; Dr. Dan Brannin, Medical Arts Building, Dallas, Secretary.

Texas Radiological Society, Sherman, January 18, 1941. Dr. Jerome H. Smith, San Angelo, President; Dr. L. W. Baird, Temple, Secretary.

Texas Club of Internists, Boston, October, 1940. Dr. Carl Lovelace, Waco, President; Dr. George Herrmann, Medical College, Galveston, Secretary.

Texas Association of Obstetricians and Gynecologists, Marlin, 1940. Dr. H. Reid Robinson, Galveston, President; Dr. Julius McIver, 1314 Medical Arts Building, Dallas, Secretary.

Texas Pediatric Society, Dallas, May 15, 1940. Dr. T. A. Tumbleson, Beaumont, President; Dr. Frank Lancaster, 4409 Fannin Street, Houston, Secretary.

Texas Neurological Society, Dallas, May 13, 1940. Dr. Charles W. Castner, Austin, President; Dr. Wilmer L. Allison, Medical Arts Building, Fort Worth, Secretary.

Texas Railway and Traumatic Surgical Association, Dallas, May 13, 1940. Dr. G. V. Brindley, Temple, President; Dr. Ross Trigg, First National Bank Building, Fort Worth, Secretary.

Texas State Pathological Society, Dallas, May 14-15. Dr. Geo. T. Caldwell, Dallas, President; Dr. M. D. Bell, 1109 Medical Arts Building, Dallas, Secretary.

Texas State Heart Association, Dallas, May 13, 1940. Dr. Joseph Kopecky, San Antonio, President; Dr. V. E. Schulze, San Angelo, Secretary.

Texas Dermatological Society, Dallas, May 13, 1940. Dr. Leslie Smith, El Paso, President; Dr. Duncan O. Poth, 1230 Nix Professional Building, San Antonio, Secretary.

Texas Surgical Society, Houston, Oct. 7-8. Dr. Everett Jones, Wichita Falls, President; Dr. Walter Stuck, 1426 Nix Professional Building, San Antonio, Secretary.

Texas Orthopedic Society, Dallas, May 13, 1940. Dr. Sim Driver, Dallas, President; Dr. Ruth Jackson, Medical Arts Building, Dallas, Secretary.

Texas Association of Medical Anesthetists, Dallas, May 13, 1940. Dr. George H. Paschal, San Antonio, President; Dr. R. A. Miller, 1415 Nix Professional Building, San Antonio, Secretary.

Texas Society of Gastro-enterologists and Proctologists, Dallas, May 13, 1940. Dr. Curtice Rosser, Dallas, President; Dr. James J. Gorman, 701 First National Bank Building, El Paso, Secretary.

Texas Mental Hygiene Association. Dr. Paul White, Austin, President; Dr. Evelyn M. Carrington, Huntsville, Secretary.

Texas Tuberculosis Association. Dr. E. G. Faber, Tyler, President; J. W. Butler, Galveston, Secretary.

Texas Public Health Association, Fort Worth, Oct. 7-9, 1940. Dr. J. W. E. H. Beck, Austin, President; Mr. P. A. Kerby, State Department of Health, Austin, Secretary.

Second District Medical Society. Dr. W. V. Ramsey, Abilene, President; Dr. W. T. Sadler, Merkel, Secretary.

Third, Panhandle, District Medical Society, Lubbock, Oct. 8-9, 1940. Dr. F. A. White, Childress, President; Dr. H. H. Latson, 301 Polk St., Amarillo, Secretary.

Fourth District Medical Society, Ballinger, Oct., 1940. Dr. J. P. Anderson, Brady, President; Dr. O. H. Chandler, Ballinger, Secretary.

Fifth and Sixth, Southwest District Society, McAllen, June 29-30. Dr. Cary Poindexter, Crystal City, President; Dr. W. W. Bondurant, Jr., 1512 Nix Professional Building, San Antonio, Secretary.

Seventh, Austin District. Dr. Joe A. Shepperd, Burnet, President; Dr. A. L. Nanny, Marble Falls, Secretary.

Eighth, Ninth and Tenth District Medical Society, Beaumont, 1940. Dr. J. O. Bartell, Conroe, President; Dr. A. A. Ledbetter, Medical Arts Building, Houston, Secretary.

Eleventh District Society, Palestine, Oct., 1940. Dr. Clayton Shirley, Tyler, President; Dr. C. C. McDonald, Tyler, Secretary.

Twelfth, Central Texas District Society, Marlin, July 9, 1940. Dr. Dan Warren, Waco, President; Dr. R. K. Harlan, Temple, Secretary.

Thirteenth, Northwestern District Society, Wichita Falls, September. Dr. Tom Bond, Fort Worth, President; Dr. J. Edward Johnson, Mineral Wells, Secretary.

Fourteenth District Society, Bonham, June, 1940. Dr. Ira L. Thomas, Gainesville, President; Dr. R. S. Usry, 1835 Garrett, Dallas, Secretary.

Fifteenth, Northeast District Society, Texarkana, Oct. 8, 1940. Dr. Hugh M. Ragland, Gilmer, President; Dr. J. N. White, Texarkana, Secretary.

ARMY EXPERIENCE FOR PHYSICIANS

An interesting medical corollary to the augmentation of the United States Army during 1940 and 1941 and to the planned large scale Army maneuvers during the spring and summer of 1940 is the broad medico-military experience which a great number of civilian physicians will receive. Medical Reserve officers are being used to augment the entire Army Medical Service, which includes everything from small unit installations to large Station Hospitals, General Hospitals, and hospitals designed primarily for the treatment of specific types of cases.

Physicians under 35 years of age who are desirous of obtaining extended active duty with the Army but who do not hold Reserve commissions are being offered appointments in the Medical Corps Reserve in the grade of 1st Lieutenant, in order to permit them to be placed on such duty. Captains and Lieutenants are at present being offered excellent assignments throughout the continental United States, and it is hoped that authority will be granted to actually permit some officers to go to Hawaii and Panama. In addition to having a new and very busy experience in the practice of medicine, the average officer finds the pay and allowances attractive. The pay and allowances for a married 1st Lieutenant amount to approximately $263.00 a month; for a single 1st Lieutenant to approximately $225.00 a month; for a married Captain to approximately $316.00 a month; and for a single Captain to approximately $278.00 a month. In most cases the above pay and allowances would apply inasmuch as Government quarters are not usually available for officers on extended active duty. In the few instances where Government quarters are available, the amounts would be $40, $60, $60, and $80 less per month respectively. In addition, the officer is reimbursed for mileage traveled from his home to his station, and upon completion of his tour of duty is reimbursed similarly for the travel to his home.

Application for one year of active duty, or for appointment in the Medical Corps Reserve with a view to obtaining one year of active duty with the Army, should be requested at once by a letter addressed to the Commanding General of the Corps Area* wherein the physician permanently resides. In addition, the application should contain concise information regarding permanent address, temporary address, number of dependents, earliest date available for active duty, and that internship has been (or will be) completed; and it should be accompanied by a report of physical examination recorded on the Army Form W. D. A. G. O. 63, which may be obtained from any Army station. From the group of Reserve officers placed on extended active duty since August 1939, over 25 per cent of those within the age requirements of 32 years of age or less for commission in the Regular Army Medical corps found military service sufficiently to their liking to cause them to take entrance examinations for the Regular Army.

LIBRARY NOTES

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Requests for packages should be addressed "Library, State Medical Association of Texas, 1404 W. El Paso Street, Fort Worth, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Only one package may be borrowed at a time, and packages are allowed to remain in the hands of the borrower for 14 days.

Package Service

Packages were mailed to the following from the Library of the State Medical Association during April:

Dr. M. E. Jacobson, Brownfield—*Tuberculosis, Pulmonary, artificial pneumothorax in* (26 articles).

Dr. Chas. B. Reed, Clarksville—*Sciatica, therapy* (10 articles); *Undulant Fever, diagnosis and therapy* (15 articles).

Miss Marian A. Baker, Lufkin—(2 books).

Dr. J. Wesley Head, Borger—*Epilepsy, therapy* (1 article).

Mrs. W. G. Mitchell, San Angelo—*Wagner Health Bill* (3 articles).

Dr. W. D. Black, Barstow—*Medicine, socialized* (15 articles).

Dr. E. J. Tucker, Liberty—*Cecostomy* (7 articles).

*Eighth Corps Area (Texas, Oklahoma, Colorado, New Mexico, Arizona) Fort Sam Houston, San Antonio, Texas.

Dr. Leon Kopecky, San Antonio—*Blood, sedimentation* (21 articles).
Dr. Fred S. Wimberly, Sanatorium—*Fungous Diseases* (6 articles).
Dr. W. A. King, San Antonio—*Arsenic, therapy* (27 articles).
Dr. U. S. Marshall, Weslaco—*Typhus* (28 articles).
Dr. Hayden H. Cutler, Houston—*Syphilis, therapy* (26 articles).
Miss Jane McWhorter, Roanoke—*Medicine, socialized* (15 articles).
Mrs. R. H. Guinn, Breckenridge—*Medicine, socialized* (1 article).
Dr. Dick P. Wall, Galveston—*Eyes, muscles* (7 articles).
Dr. C. M. Kent, Kenedy—*Medicine, socialized* (15 articles).
Dr. Ben L. McLeod, Jr., Graford—*Medicine, socialized* (15 articles).
Dr. C. C. Cody, Houston—*Medical Service Plans* (7 articles).
Dr. Edgar W. Loomis, Dallas—*Immunity* (17 articles).
Dr. Mildred L. Cooke, Belton—(2 books).
Dr. Frank C. Gregg, Austin—*Arthritis, therapy* (5 articles).
Dr. J. W. Hale, Grady, New Mexico—(1 journal).
Dr. S. B. Estes, Abilene—*Brain, wounds and injuries* (28 articles).
Mr. A. D. Neal, Iowa Park—*Medicine, socialized* (15 articles).
Dr. J. C. Terrell, Stephenville—*Medicine, socialized* (15 articles).
Dr. L. A. Zink, Pecos—*Cancer* (9 articles).
Dr. T. F. Trimble, Corpus Christi—*Ataxia, hereditary* (8 articles).
Dr. T. Hyde, Wichita Falls—*Colon, dilatation* (14 articles).
Dr. J. Lawrence Clark, Ennis—(1 book).
Dr. John B. Barrett, Marlin—*Tuberculosis, Pulmonary, artificial pneumothorax in* (25 articles).
Mrs. T. Wade Hedrick, Abilene—*Medicine, socialized* (4 articles).
Mr. F. B. Huey, Jr., Denton—*Medicine, socialized* (2 articles).
Mr. W. W. Few, Pearsall—*Medicine, socialized* (15 articles).
Mrs. Harry Manson, Atlanta—(3 books).
Dr. S. K. Stroud, Corpus Christi—*Eyelids, cancer* (10 articles).
Dr. Ben F. Harrison, Dallas—*Intestines, obstruction* (13 articles).
Dr. J. G. Sewell, Belton—*Child Health* (7 articles).
Dr. Masters H. Moore, Tyler—*Lungs, abscess* (18 articles); *Erythema, nodosum* (11 articles).
Miss Nancy Denton, Denton—*Medicine, socialized* (5 articles).
Dr. Vance Terrell, Stephenville—*Medicine, history* (16 articles).
Dr. Leslie Sadler, Waco—*Lungs, abscess* (26 articles).
Dr. John D. Dupre, Levelland—*Copper, poisoning* (3 articles).
Dr. G. S. Rushing, Longview—*Fallopian Tubes, surgery* (3 articles).
Dr. F. E. Rushing, Lubbock—*Rheumatic Fever* (33 articles).
Dr. William R. Snow, Abilene—(1 article).
Dr. J. Edward Hodges, Houston—*Medicine, progress* (7 articles).
Dr. G. E. Glover, Austwell—*Leukemia, myelogenous* (23 articles); *Addison's Disease* (23 articles).
Dr. Rufus A. Roberts, Pecos—*Tryparsamide, toxicity* (6 articles).
Dr. Bernard B. Friedman, Corpus Christi—(5 journals).
Dr. Lois L. Norman, Sherman—*Mediastinum, tumors* (16 articles).
Dr. Zack Bobo, Jr., Arlington—(3 journals).
Dr. Homer B. Johnson, Midland—*Blood, sedimentation* (20 articles).
Dr. W. N. Livingston, Terrell—*Poliomyelitis* (25 articles).
Dr. J. E. Armstrong, Paris—*Rabies* (20 articles).
Dr. H. B. Eisenstadt, Port Arthur—*Sleep, disturbances* (17 articles).
Dr. Clyde Adams, Rusk—*Drugs, addiction* (16 articles).
Dr. Sam G. Dunn, Lubbock—*Psittacosis* (15 articles).
Dr. George G. Wyche, Alice—*Child Health* (8 articles).
Dr. J. J. Mulloy, Stephenville—*Rhus, poisoning* (13 articles).
Dr. Asa Beach, San Antonio—(1 journal).
Dr. J. T. Krueger, Lubbock—*Vagina, absence* (12 articles).
Dr. Curtice Rosser, Dallas—(1 book).
Dr. Reuben B. Rodarte, El Paso—*Undulant Fever, complications and sequels* (18 articles).
Dr. Chas. A. Smith, Texarkana—*Undulant Fever* (28 articles).
Dr. Marion R. Lawler, Mercedes—*Schools, health education and hygiene* (13 articles).
Dr. Alfred W. Harris, Dallas—(1 book).
Dr. John M. Chapman, Ennis—*Child Health* (5 articles).
Dr. K. B. Urban, Crystal City—*Child Health* (7 articles).
Dr. John B. Bennett, Lamesa—*Heart* (2 articles).
Dr. E. D. McDonald, Santa Anna—*Endocarditis, infectious* (24 articles).
Dr. John A. Wiggins, Sanatorium—*Lungs, cysts* (24 articles).
Dr. Robert F. Thompson, El Paso—*Fistula, vesicovaginal* (13 articles).
Dr. F. T. McIntire, San Angelo—*Albuminuria, orthostatic* (11 articles).
Dr. R. W. Loveless, Lamesa—*Nephritis, therapy* (12 articles).
Dr. Don W. Freeman, Denison—*Tumors, angioma* (3 articles).
Dr. Y. S. Jenkins, Taft—*Purpura, hemorrhagica* (22 articles).
Dr. Earl Reed, San Juan—*Salpingitis* (22 articles).
Dr. A. W. Hinchman, Brady—*Neuroses and Psychoneuroses* (12 articles).
Dr. C. D. Stewart, Corpus Christi—(1 journal).
Dr. T. D. Young, Roscoe—*Shock* (26 articles).

Accessions

Macmillan Company, New York—Bodansky: Biochemistry of Disease.
The Commonwealth Fund, New York—Lord, Robinson and Heffron: Chemotherapy and Serum Therapy of Pneumonia.

Summary

Reprints received, 1646	Local users, 44
Journals received, 161	Borrowers by mail, 80
Items consulted, 312	Packages mailed out, 85
Items taken out, 194	Items mailed out, 1042

Total items consulted and loaned, 1548

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Nonofficial Remedies:

Amniotin.—A liquid containing a highly concen-

trated, noncrystalline preparation of estrone (ketohydroxyestrin) together with a small varying amount of other estrogenic ketones extracted from the urine of pregnant mares. Amniotin is used either orally or by hypodermic injection of an oil solution in the same conditions for which estrone (theelin) and estriol (theelol) are recommended. The product is supplied in the following dosage forms: Amniotin in Oil, 2,000 International Units; Amniotin in Oil, 10,000 International Units; Amniotin in Oil, 20,000 International Units; Amniotin Capsules, 1,000 International Units; Amniotin Capsules, 2,000 International Units; Amniotin Capsules, 4,000 International Units; Amniotin Pessaries, 1,000 International Units; Amniotin Pessaries, 2,000 International Units. E. R. Squibb & Sons, New York.—*J. A. M. A.*, March 2, 1940.

Ampules Mercury Succinimide 0.02 Gm. (⅓ grain), 1 cc.—Each cubic centimeter contains mercuric succinimide 0.02 Gm. (⅓ grain) and chlorobutanol not more than 0.008 Gm. dissolved in distilled water. Upjohn Company, Kalamazoo, Mich.

Pollen Extracts-Barry.—Liquids obtained by extracting the dried pollen of various species of plants. For a statement of actions, uses and dosage see general article, Allergenic Protein Preparations (New and Nonofficial Remedies, 1939, p. 27). The following pollen extracts-Barry are marketed in packages of three vials: Grass Mixture (Spring), (June Grass, Timothy, Red Top, Sweet Vernal Grass and Orchard Grass pollen extracts, in equal proportions); Ragweed (Large and Small Ragweed pollen extracts, in equal proportions). Barry Allergy Laboratory, Inc., Marietta, Pa.

Theobromine and Sodium Acetate-Mallinckrodt.—A brand of theobromine sodium acetate-N.N.R. (New and Nonofficial Remedies, 1939, p. 522). Mallinckrodt Chemical Works, St. Louis.

Pentobarbital-Sodium-Gane.—A brand of pentobarbital-sodium-N.N.R. (New and Nonofficial Remedies, 1939, p. 121). Gane's Chemical Works, Inc., New York.

Pulvules Sulfanilamide-Lilly, 2 grains.—Each pulvule contains sulfanilamide (New and Nonofficial Remedies, 1939, p. 466), 2 grains. Eli Lilly & Co., Indianapolis, Ind.

Pulvules Sulfanilamide-Lilly, 5 grains.—Each pulvule contains sulfanilamide (New and Nonofficial Remedies, 1939, p. 466), 5 grains. Eli Lilly & Co., Indianapolis, Ind.—*J. A. M. A.*, March 16, 1940.

Tablets Sulfapyridine-Parke, Davis & Company, 0.5 Gm. (7.7 grains).—Each tablet contains sulfapyridine (Revised Supplement to New and Nonofficial Remedies, 1939, p. 28; also *The Journal of the A. M. A.*, Jan. 27, 1940, p. 327), 0.5 Gm. Parke, Davis & Company, Detroit, Mich.

Sulfapyridine-Squibb.—A brand of sulfapyridine-N.N.R. (Revised Supplement to New and Nonofficial Remedies, 1939, p. 28). The product is marketed in the form of capsules, 0.25 Gm. (3.38 grains) and tablets, 0.5 Gm. (7.7 grains). E. R. Squibb & Sons, New York, N. Y.

Stearns Ascorbic Acid Tablets, 25 mg.—Each tablet contains ascorbic acid (New and Nonofficial Remedies, 1939, p. 499), 25 mg. Frederick Stearns & Company, Detroit, Mich.

Sulfapyridine Sodium Monohydrate-Merck. — A brand of sulfapyridine sodium-N.N.R. Merck & Co., Inc., Rahway, N. J.

Tuberculin Intracutaneous for Mantoux Test (New and Nonofficial Remedies, 1939, p. 420).—Also marketed in packages of one ampule (single test) containing 1 cc. of a 1 to 100 dilution of old tuberculin (O. T.) with vial of glycerin bouillon control sufficient for ten single tests; and in packages of one ampule (single test) containing 5 cc. of a 1 to 100 dilution of old tuberculin (O. T.) with vial of glycerin bouillon for control sufficient for fifty single tests. The National Drug Co., Philadelphia.

ACCEPTED DEVICES FOR PHYSICAL THERAPY

The following devices have been accepted by the Council on Physical Therapy of the American Medical Association for inclusion in its list of accepted devices for physical therapy:

Carrier Room Ventilator, Type 56 B.—This ventilator is designed to cause the circulation of outside and inside air in a room and to filter out dust and pollen. A damper provides means for adjusting the proportions of outside and recirculated air. Sound insulation is also provided in the mechanism. The ventilator comes in two sizes—the smaller one providing 250 cubic feet of air per minute and designed for average sized rooms, and the larger size, designed for larger rooms, offices and apartments, supplies up to 500 cubic feet of air per minute. The firm claims that the unit "supplies cleaned, outside air, without drafts; circulates filtered, refreshing, room air; shuts out noise, dirt, dust and pollen." The firm submitted evidence to support these claims and the Council conducted an investigation to test their validity. These tests showed an efficiency of the unit for pollen removal of more than 97 per cent for the first week of operation. At the end of two weeks the efficiency had dropped to 96 per cent for pollen removal. Apparently the filter loses some of its efficiency in time for holding pollen. The filter is one of the discardable type and should be renewed as frequently as local conditions demand. The Carrier Corporation, Syracuse, N. Y.

Cold Quartz Ultraviolet Lamp, Exemplar Model.—This lamp provides ultraviolet generators of the body grid, tangency equalization and orificial types, and is designed strictly for use by physicians. The lamp is attached to a horizontal arm which pivots both at the upright standard and at a section joint. The arm may thus be extended to the full length of 25 inches or folded to a smaller length. The lamp may be adjusted up to a height of 60 inches, and a pneumatic cushion is provided to prevent accidental shock to the grid element while it is being lowered. Tests made for the Council substantially confirmed the data submitted by the manufacturer. E. J. Rose Manufacturing Company, Los Angeles, Calif.—*J. A. M. A.*, March 2, 1940.

PROPAGANDA FOR REFORM

Court of Appeals Rules Against Brinkley.—Last week the United States Fifth Circuit Court of Appeals of New Orleans upheld a federal district court decision in the libel suit brought by John R. Brinkley against the editor of *Hygeia*. The statement of the court in making this decision was as follows:

> "We are spared the necessity of discussing the assignments of error in this decision and of reviewing the evidence. It is sufficient to say that the evidence of the plaintiff, placed on the stand by the defendant, tends to show the truth of the statements of fact complained of, and we find no substantial evidence tending to show the defendant was actuated by malice or that plaintiff suffered any actual damage compensatable in money."
>
> —*J. A. M. A.*, March 9, 1940.

Oxygen-Carbon Dioxide Mixtures.—In considering the acceptance of a submitted oxygen-carbon dioxide mixture, the Council on Pharmacy and Chemistry asked the assistance of Dr. Alvan L. Barach, Assistant Professor of Clinical Medicine at Columbia University College of Physicians and Surgeons, New York. Dr. Barach's report on the acceptance of the submitted preparation (description of which was published in *The Journal of the A. M. A.*, Sept. 9,

1939, p. 1033) also included a general consideration of the use of oxygen-carbon dioxide mixtures. In his report Dr. Barach has considered the physiologic functions of carbon dioxide therapy, its clinical application, the contraindications to its use, and methods of administration. The Council adopted Dr. Barach's report and authorized its publication in full, together with an expression of appreciation to Dr. Barach for his report.—*J. A. M. A.*, March 23, 1940.

NEWS

Texas State Board of Medical Examiners announces that it will conduct examinations of applicants for medical licensure in Texas, June 17, 18, and 19, at the St. Anthony Hotel, San Antonio.

The Texas State Hospital Association concluded its annual session at San Antonio recently, advises the San Antonio *News*, with the election of the following officers: President-elect, Harry Hatch, superintendent of the Northwest Texas Hospital, Amarillo; first vice-president, Sister Evangeline, superintendent of St. Joseph's Infirmary, Houston; second vice-president, Miss Eva Wallace, superintendent of All Saints' Hospital, Fort Worth; third vice-president, C. J. Hollingsworth, superintendent of West Texas Hospital, Lubbock; treasurer, Miss Alice Taylor, superintendent of Elmwood Sanitarium, Fort Worth, and new trustees, Joe Miller, superintendent of City-County Hospital, Fort Worth, and Mrs. Ed Sizer, Jr., superintendent of Fred Roberts Memorial Hospital, Corpus Christi. J. H. Groseclose, Dallas, retiring president, became an ex-officio member of the board of trustees. Miss Ara Davis is president for the ensuing year, 1940-1941.

Alpha Omega Alpha honor medical fraternity received initiates from the following members of the senior and junior classes at the University of Texas School of Medicine, recently, in that city, informs the Galveston *News*: Senior class—Frederick Funston Rogers, Daniel Edwards Jenkins, James Edwin Robertson, J. Jinkins, Jr., Robert Wallace Osburn, Lewis Branard Kost, Miss Marie Louise Surgi, Lester Karotin, William Rozell Knight, III, and Charles Edward Oswalt, Jr., and Junior class—Jere Marklee Bauer, Stanley Louis Clayton, Wayne Hanson Granger, William Cohn Levin and Clarence Thorpe Ray.

Awards were made to the following students of the freshman, sophomore and junior classes for the year 1938-39: Freshman class, James Neal Walker; sophomore class, Clarence Thorpe Ray; and junior class, Miss Mildred Stanley.

Dr. R. McLester, professor of medicine at the University of Alabama School of Medicine, was the guest speaker. His subject was "Newer Aspects of Nutrition." Dr. McLester was introduced by Dr. G. W. N. Eggers, president of the fraternity.

The Dallas Southern Clinical Society recently elected the following officers, reports the Dallas *News*: President, Dr. Everett C. Fox; vice-president, Dr. Howard Crutcher; secretary, Dr. Charles H. Warren; treasurer, Dr. Tom H. Cheavens; members at large of the executive committee, Dr. O. Rene Caillet, Dr. M. K. McCullough, Dr. Harold T. Nesbit, and Dr. Edwin L. Rippy.

Certificates were issued to the following ten members who have rendered meritorious service to the medical profession, particularly in Dallas, during many years of membership in the group: Dr. J. W. Bourland, Dr. Edward H. Cary, Dr. Elbert Dunlap, Dr. C. M. Grigsby, Dr. Calvin R. Hannah, Dr. O. M. Marchman, Dr. J. M. Martin, Dr. John O. McReynolds, Dr. Hugh Leslie Moore, and Dr. C. M. Rosser.

The Birth Control League of Texas met April 18-19 at the Hotel Texas, Fort Worth, with delegates from all sections of the State. Physicians contributing to the program included Dr. Judson Taylor, Houston, director of the State organization; Dr. R. L. Grogan, Fort Worth; and Dr. J. Shirley Sweeney, Dallas, advises the Fort Worth *Press*.

New Foard County Hospital.—Construction was recently started on a new hospital for Foard County at Crowell, states the Crowell *News*. The preliminary work included demolition of the old hospital building with salvaging of old material and preparation of the grounds for the new hospital. The project is expected to cost about $24,000. Bonds were voted in 1938, but many delays occurred in connection with meeting governmental requirements to secure W. P. A. funds for the construction.

New Hospital for Longview.—The Ross-Khoury Hospital for Women and Children was recently opened at Longview according to the Longview *News*. The building was a former home of semi-colonial type altered to meet the needs of the hospital, the principal change being a new addition to the south wing. The hospital will provide accommodations for fourteen patients, with four bedrooms down stairs, on which floor are also the lavatory, *x*-ray room and emergency operating room. On the second floor are eight bedrooms, operating room, delivery room, nursery, and other hospital accessories. New modern equipment will serve the institution. With this latest addition, Longview now has seven hospitals and clinice.

Narcotic Drug Traffic Halted.—Federal narcotic agents report that drug addicts are feigning all manner of maladies in their desperation to secure narcotics from physicians, as a result of vigorous Federal prosecution which has tended to reduce the traffic considerably. It is further reported that the European war has cut off the smuggling of narcotics into this country. Addicts have been driven to the use of the weaker opium derivatives such as paregoric, according to the Dallas *News*.

New Matagorda County Hospital was formally opened March 16 at Bay City, informs the Palacios *Beacon*. The hospital is located one block east of the Wharton highway in the north part of the city. The new hospital contains thirty-two beds, a major operating room, an emergency operating room, and an obstetric room in addition to the usual hospital accessories.

At the formal opening visitors were served a luncheon and the welcoming committee included all civic organizations. The hospital was built with funds derived from the $65,000 bond issue voted in 1939.

NEW MATAGORDA COUNTY HOSPITAL

Tom Green County Endorses City-County Health Unit.—Tom Green County Commissioners recently endorsed the establishment of a city-county health unit to serve San Angelo and Tom Green County, following similar endorsement by the San Angelo commissioners. The unit will be unique in that it will provide not only for a public health service, but

for the treatment and hospitalization of indigents. Of the $32,600 yearly appropriation estimated to be required, the State would supply $10,600, the county $12,000 and the city $10,000, states the San Angelo *Standard-Times*. Only recorded indigents, whose case histories are known, and who are unable to pay for hospitalization and medical treatment will be eligible for those services, but emergency treatment will not be denied when the occasion demands. Policy making will be left to an administrative board composed of two named by the city commission, two by the county commissioners' court and three by the Tom Green County Medical Society, with provision for a rotating membership. The board may be increased to nine. It was pointed out that the two basic requirements to receive state and federal funds were a sound administrative program and qualified personnel. To serve the unit two doctors would be employed, one as a director and the other as a full time physician to serve the indigent; two nurses, one sanitarian, a clerk and a technician.

The Community Service Association, the Red Cross and the Tom Green County Tuberculosis Association were listed among non-tax supported units which would coöperate with the health unit, which would serve as a clearing house.

Institute for Health Agency Employees.—The Dallas County Hospital Council sponsored an institute for employees of all health agencies in Dallas, April 8-12, according to the Dallas *Journal*. The institute was said to be the first of its kind in the United States. Two lectures were presented each night to the institute by physicians and health agency officials. The primary purpose of the institute was to bring various types of health workers together for a better understanding of their joint responsibilities. Topics for discussion included hospital administration, trends in nursing, staff organization, food service organization, problems of the small hospital, purchasing, storage and distribution, hospitalization insurance, utilities and general maintenance of hospitals, hospital accounting and bookkeeping, and hospital public relations. Invitations were extended to all Dallas and neighboring institution employees to attend.

The Texas Surgical Society held its silver anniversary meeting April 1-2, in the Hotel Adolphus, Dallas.

Dr. Maxwell Harbin, professor of orthopedic surgery, Western Reserve University, Cleveland, Ohio; Dr. N. G. Alcock, professor of urology, University of Iowa, Iowa City, and Dr. Loyal David, professor of surgery, Northwestern University, Chicago, were honor guests. The following scientific program for the two days was carried out:

Melanotic Tumors—Q. B. Lee, M. D., Wichita Falls.
Some Experiments in Gas Embolism—R. M. Moore, M. D., Galveston.
Surgical Diseases of the Knee Joint—Maxwell Harbin, M. D., Cleveland, Ohio.
Three Years Experience with Vitallium—C. S. Venable, M. D., San Antonio.
Arthroplasty of the Knee and Hip with Vitallium Interposition—W. D. Carrell, M. D. Dallas.
Wound Healing—W. C. Tenery, M. D., Waxahachie.
Value of Urological Findings in the Differential Diagnosis of Abdominal Tumors—N. G. Alcock. M. D., Iowa City, Iowa.
Subtotal Cystectomy for Intractable Hunner Ulcer—A. I. Folsom, Dallas.
Postoperative Complications—H. G. Heaney, M. D., Corpus Christi.
John Allen Wyeth, M. D.—W. L. Crosthwait, M. D., Waco.
Cause and Surgical Treatment of Hydrocephalus with Spina Bifida—A. D'Errico, M. D., Dallas.
The Electro-encephalogram in Certain Clinical Conditions—S. R. Snodgrass, M. D., Galveston.
Experimental and Clinical Experiences in the Surgical Treatment of Essential Hypertension—Loyal Davis, M. D., Chicago.
Carcinoma of the Colon—T. A. Pressly, M. D., San Antonio.
Diagnosis and Treatment of Obstructive Jaundice—J. E. Pittman, M. D., Houston.

At noon on the first day, Dallas members were hosts at a luncheon.

Dr. Everett Jones, Wichita Falls, president of the Society, was host to members at a cocktail party at the Hotel Adolphus, preceding the twenty-fifth Anniversary Dinner in honor of charter members of the organization. An attractive memento of the occasion was a facsimile edition of the San Antonio *Express* of October 20, 1915 for the front and back covers, with the inside pages containing a current news item of the present silver anniversary meeting, photographs and biographical sketches of practically all of the original twenty-five charter members, and an item in the Houston *Chronicle*, March 7, 1915, giving an account of the organization meeting, the day previous, as follows:

"The Texas Surgical Society was formally organized at a meeting in Houston yesterday. Dr. James E. Thompson of Galveston was elected president and Dr. W. Burton Thorning of Houston, secretary. The society announces as its object the elevation of the standards of surgery in Texas and the elimination of the practice of fee splitting.

"The following charter members were in attendance: Drs. K. H. Aynesworth, Waco; F. L. Barnes, Houston; F. C. Beall, Fort Worth; I. C. Chase, Fort Worth; H. M. Doolittle, Dallas; H. R. Dudgeon, Waco; J. W. Hale, Waco; W. G. Jameson, Palestine; E. J. Reeves, Dallas; Bacon Saunders, Fort Worth; A. C. Scott, Temple; C. S. Venable, San Antonio; R. R. White, Temple; James E. Thompson, Galveston; Joe Becton, Greenville; John T. Moore, Houston; W. Burton Thorning, Houston; J. B. Smoot, Dallas; F. P. Paschal, San Antonio; J. H. Reuss, Cuero; A. B. Small, Dallas."

The historical sketches of the original founders are intensely interesting. On the back cover of the San Antonio *Express* of October 20, 1915, appears in full the presidential address of the late Dr. James E. Thompson of Galveston, presented at the first semi-annual meeting of the Texas Surgical Society held in the Bexar County Medical Society hall in the Bedell Building in San Antonio, October 19, of that year. The front cover of the *Express* carries exciting news of the day, including such items as the formal recognition by the United States of Venustiano Carranza as the chief executive of the Republic of Mexico; bandit raids on the Mexican border; Russian victories under the Czar over Germany, and the formal declaration of war by Italy and Russia on Bulgaria.

At the annual dinner on the evening of the first day of the present meeting Dr. K. H. Aynesworth of Waco, delivered an eulogistic address on the late Dr. Bacon Saunders.

Dr. John T. Moore of Houston, discussed the early days of the Texas Surgical Society.

Dr. Charles Flynn of Dallas, presented keys to the surviving charter members.

Dr. Everett Jones of Wichita Falls, president, was toastmaster at the banquet. Other current officers of the Society include: First vice-president, Dr. W. L. Crosthwait, Waco; second vice-president, Dr. H. G. Heaney, Corpus Christi; secretary, Dr. Walter Stuck, San Antonio; treasurer, Dr. C. B. Carter, Dallas; recorder, Dr. G. W. N. Eggers, Galveston; Council—Dr. Elbert Dunlap, chairman, Dallas; Dr. Samuel D. Weaver, Dallas; Dr. G. V. Brindley, Temple; Dr. C. S. Venable, San Antonio, and Dr. H. L. D. Kirkham, Houston.

The local arrangements committee for the meeting consisted of Dr. C. W. Flynn, chairman; Dr. A. I. Folsom and Dr. C. B. Carter.

The next meeting of the Society will be held in Houston, October 8 and 9.

The American Heart Association will hold its sixteenth scientific session at the Hotel Roosevelt, New York City, June 7-8. The general cardiac program will be given on the first day and the program of the second day will be devoted to the peripheral circulation.

The American College of Chest Physicians will meet June 8-10, at the Biltmore Hotel, New York City. The program will consist of formal papers, clinical luncheons, dry clinics, symposiums, and the business session. On the evening of the first day a dinner meeting of the Board of Regents and the House of Governors will be held. The annual banquet will be held the evening of the second day.

The American Association of Industrial Physicians and Surgeons will hold its twenty-fifth annual meeting in conjunction with the first annual meeting of the American Industrial Hygiene Association at the Hotel Pennsylvania, New York City, June 4-7. The program will be devoted to an intensive discussion of the problems of industrial health in all of its various medical, technical, and hygienic phases, with particular stress on prevention and control of occupational hazards. Technical and scientific exhibits will be featured. The general medical profession is invited to attend.

All Saints Hospital staff, Fort Worth, recently elected the following officers for the new year: President, Dr. W. B. West; first vice-president, Dr. John W. Garnett; second vice-president, Dr. Preston Nesbitt, and seceretary, Dr. E. E. Anthony (re-elected).

Postgraduate Assembly of Negro Physicians in Texas was held for the fourth year, March 4, 5, 6, and 7, at the Prairie View State Normal and Industrial College, Prairie View, Texas, under the sponsorship of the College, the Texas Tuberculosis Association, the Texas State Department of Health, and the Lone Star Medical, Dental and Pharmaceutical Association, the last named organization being composed of negro physicians, dentists and pharmacists.

White Texas physicians contributing to the clinical program included Dr. J. Truett Gandy, Houston; Dr. C. L. McClellan, Kerrville; Dr. John W. Potts, Fort Worth; Dr. John Z. Gaston, Houston; Dr. Hugh Leslie Moore, Dallas; Dr. John W. Spies, Dean, University of Texas School of Medicine, Galveston; and Dr. Howard Smith and Dr. J. M. Coleman of the Texas State Department of Health, Austin. The program consisted of lectures, dry clinics, and ward walks. In addition there were scientific exhibits and motion pictures, and public health meetings. The assembly was also contributed to by out-of-state lecturers.

Postgraduate Course in Obstetrics.—The University of Chicago and the Chicago Lying-in Hospital Department of Obstetrics and Gynecology, in cooperation with the Illinois State Department of Public Health and the United States Children Bureau will conduct a postgraduate course in obstetrics from five to six weeks, planned especially for general practitioners. The registration fee for the course is $25, of which amount $10 will be returned when the course is completed. Cancellation will not be accepted and refunds made unless notice is given one month prior to the beginning of the course.

The teaching will be carried on in all the departments of the Chicago Lying-in Hospital and Dispensary including the birth room, the out-patient clinic, the home service division, and the various laboratories. Physicians will, of course, be required to pay their own board and room and personal incidental expenses.

Applications and inquiries should be addressed to: Postgraduate Course, Department of Obstetrics and Gynecology, 5848 Drexel Avenue, Chicago, Illinois. Checks should be made payable to the Chicago Lying-in Hospital.

A. M. G. A. Golf Tournament.—The American Medical Golf Association will hold its annual golfing tournament at Winged Foot Golf Club, Mamaroneck, Westchester County, New York, on Monday, June 10. Members may tee off from 7:30 a. m. to 2:00 p. m. Fifty trophies and prizes will be awarded. The club at which the tournament will be held is one of the most elaborate in the country, with a beautiful clubhouse and two sporty courses. It is anticipated that medical golfers from all parts of the United States will compete. All male fellows of the American Medical Association are eligible and cordially invited to become members of the A. M. G. A. Those interested are requested to write Executive Secretary Bill Burns, 2020 Olds Tower, Lansing, Michigan, for application blanks. Participants in the A. M. G. A. tournament are required to bring their home club handicap, signed by the club secretary, at the first tee on the day of play. No handicap over 30 is allowed. Only active Fellows of the A. M. G. A. may compete for prizes. No trophy is awarded to a Fellow who is absent from the annual dinner, which is always worth while waiting for.

Personals

Dr. P. W. Malone, Big Spring, was recently reelected president of the West Texas Memorial Association.

Dr. Holman Taylor, Secretary of the State Medical Association, Fort Worth, was a speaker at a recent sales meeting of Luzier's, Inc. in Fort Worth.

Dr. S. D. Whitten, Greenville, was recently appointed Hunt County health officer to succeed Dr. L. E. Gee, resigned.

Zill Harlan Shaw, age 22, stationed at the United States Army Hospital, Fort MacArthur, San Pedro, California, son of *Dr. and Mrs. Frank Shaw*, Marlin, was accidently drowned January 23, 1940.

Dr. Milton I. Steckler is taking a year's postgraduate work in New York City.

Dr. C. M. Cash, San Benito, was honored recently by the dedication in his name of a room in the Valley Baptist Hospital by a group of women, in recognition of his professional services for the past forty years. A bronze plaque, bearing the inscription, "Dr. Cash Room," donated by Dr. Cash's children was placed on the door. In connection with the dedication, Dr. Cash was the recipient of a portfolio of pictures of many of the children he has brought into the world. The portfolio was attractively bound with wood covers on which was a hand-burned design representing an old-fashion horse and buggy doctor racing with the stork. Dr. Cash came to San Benito in 1914. As a general practitioner he has served that community continuously since that time, informs the Harlingen *Star*.

Dr. George R. Herrmann, professor of medicine, University of Texas, School of Medicine, Galveston, will address a joint meeting of the St. Louis Postgraduate Clinical Conference and the St. Louis Medical Society, May 14, on the subject "Recognition and Management of Cardiac Emergencies."

Dr. H. Frank Carman, Dallas, member of the board of directors of the National Tuberculosis Association, addressed a joint gathering of civic and service club members of Longview, April 9, under the sponsorship of the Gregg County Tuberculosis Association, advises the Longview *News*.

Dr. R. Henry Harrison, Bryan, was recently promoted from Major to Lieutenant Colonel of the medical Reserve Corps, U. S. Army, states the Bryan *Eagle*.

Dr. John W. Spies, Dean of the University of Texas, School of Medicine, Galveston, was recently elected to the Royal Society of Tropical Medicine and Hygiene in London, in recognition of work he has done in connection with public health, states the Bonham *Favorite*, the home town newspaper of Dr. Spies.

Dr. Tom H. Taylor, Brownwood, was recently appointed a member of the State Welfare Board, according to the Dallas *Journal*.

MARRIAGES

Dr. Frank Samuel Griffin, Jr., of Liberty, to Miss Helen Shattuck, Alto, March 10, 1940.

Dr. E. J. Tucker of Liberty, to Miss Lola Dickson, March 10, 1940.

Dr. K. B. Walborn to Miss Annie Evangeline Pool, both of Dallas, March 24, 1940.

BIRTHS

To Dr. and Mrs. Nelson L. Schiller, Brenham, twin sons, Nelson Louis and Nathan Wayne, February 27, 1940.

To Dr. and Mrs. Floyd S. Franklin, Dallas, a son, David Denoyelles, March 4, 1940.

To Dr. and Mrs. Albert D'Errico, Dallas, a son, February 27, 1940.

To Dr. and Mrs. J. Stanley Oliver, Houston, a girl, Georgann, February 22, 1940.

To Dr. and Mrs. John K. Schaefer, Houston, a son, John Morton, February 17, 1940.

To Dr. and Mrs. R. T. Patterson, Houston, a son, March 28, 1940.

To Dr. and Mrs. W. T. Williams, Haskell, a son.

To Dr. and Mrs. Emil Prohl, Tahoka, a son, Emil Karl, March 25, 1940.

SOCIETY NEWS

Baylor-Knox-Haskell Counties Society

March 19, 1940

(Reported by T. W. Williams, Secretary)

Changes in the Upper Urinary Tract During Pregnancy—T. P. Frizzell, Knox City.

Baylor-Knox-Haskell Counties Medical Society held a dinner meeting at the Home Economics Cottage in Munday, March 19, with eleven members present. The scientific program as given above was carried out.

Following the dinner, Ike Hudson, Stamford, reported proceedings of the meeting held in Fort Worth, March 10, for the purpose of discussing medical care for the indigent and some plans of contract practice.

Bexar County Society

February 1, 1940

(Reported by W. W. Bondurant, Jr., Secretary)

Medical Education in Texas—John W. Spies, Dean, University of Texas School of Medicine, Galveston.

Bexar County Medical Society met February 1, in the Medical Library Building, San Antonio, with fifty-two members and three visitors present. R. E. Parrish, vice-president, presided.

Lee Rice introduced Dr. John W. Spies, who spoke on the subject of medical education in Texas.

W. B. Russ, section chairman of the evening, complimented the program committee and spoke in support of postgraduate education.

Adolph Meyer of Johns Hopkins University, Baltimore, spoke in favor of more postgraduate teaching and study. He pointed out that some states attempt to bring their teaching institutions into contact with members of the profession. He complimented the department of psychiatry at Galveston. He asserted that the medical department of the University should work together with the medical profession in the State.

New Member.—Fred B. Cooper was elected to membership on application.

William Anthony Wiesner and Ina Moodie Calhoun were elected to intern membership.

February 8, 1940

Doctors as Agents for Their Patients—Chris Emmett, Claim Agent for the Southern Pacific, San Antonio.

The Anatomy of the Abdominal Viscera—Department of Anatomy, Northwestern University, Chicago.

Bexar County Medical Society met February 8, in the Medical Library Building, with sixty-five members and two visitors present. Herbert Hill, president, presided. E. T. Coates, section chairman of the evening, presented the program as given above, introducing Mr. Chris Emmett.

Mr. Emmett, in discussing the subject of "Doctors as Agents for Their Patients," reviewed his experiences as a claim agent for twenty-eight years. He stated that the medical profession is becoming better respected by the public at large. Claims are now handled less callously than formerly. Most claims are adjusted amicably, but the lawyers and courts get from one-third to one-fourth of the money. It is rare that doctors exaggerate the extent of an injury. In some instances they have relied upon subjective symptoms, leaning in favor of their patients. It is likely that too much emphasis is given to subjective symptoms. About three-fourths of train and automobile wrecks are the results of the recent imbibition of alcohol.

The address of Mr. Emmett was discussed by John H. Burleson.

New Member.—Henry R. Hoskins was elected to membership by transfer from the Tom Green Eight County Society.

February 29, 1940

Improved Method of Fixation in the Operative Treatment of Fractures—Charles F. Clayton, Fort Worth.

Pneumococcus Meningitis, Type 14, with a Report of a Case—Philip Magrish, San Antonio.

Bexar County Medical Society met February 29, in the Library Building, with fifty-three members and six visitors in attendance. Herbert Hill, president, presided, and Peter M. Keating, program chairman, presented the scientific program given above.

IMPROVED METHOD OF FIXATION IN THE OPERATIVE TREATMENT OF FRACTURES (Charles F. Clayton).—The epochal work of C. S. Venable, Walter G. Stuck and Asa Beach was commended. Advances in orthopedic surgery in the past three decades were recounted. Malunion in fractures result from infection and inadequate fixation. Internal fixation, in the operative treatment of fractures, must last long enough and must be capable of easy removal. The essayist uses multiple screws fixed above and below and through the fractures, which are held rigid by a bar outside the wound. Casts are light and need not be applied to the body. This method is applicable to all types of fractures and has not resulted in failure in three years' use by the essayist. Dr. Clayton has used vitallium since the original publication of the use of this material by Venable and Stuck. There is little interference with repair. The procedure is so simple that it may be applied in the office instead of the operating room. Skin irritation occurs where the screws emerge from the skin. Many roentgenograms were shown illustrating the method advocated by the essayist.

Walter G. Stuck, in discussing the presentation, stated that with the procedure advocated joint movement comes early. Because of legal complications it is necessary to get as perfect repair as possible.

Peter M. Keating stressed the importance of studying the fracture patient carefully and of being certain that he is in the best physical condition possible.

PNEUMOCOCCUS MENINGITIS, TYPE 14 (Philip Magrish).—Pneumococcus meningitis has always been considered an almost universally fatal disease. Fewer than two hundred recoveries have been recorded in the literature today. In the ten-year period preceding 1939, there were nineteen cases of pneumococcus meningitis treated at the Robert B. Green Hospital, with 100 per cent mortality. The periods of hospitalization ranged from two hours to eleven days until death occurred. Methods of treatment varied from diagnostic spinal punctures to the use of sulfanilamide. Therapeutic agents used in the treatment of pneumococcus meningitis include

various dyes, ethyl hydrocuprein hydrochloride, autogenous vaccines, spinal drainage, specific serum, and more recently sulfanilamide and its related compounds. With the use of the latter drug, late and frequent reports indicate a decreasing mortality. The most successful results have been obtained where sulfanilamide compounds were combined with type specific serum.

In June, 1938, Finland and his associates at the Boston City Hospital, published a report of ten cases with six recoveries, treated with sulfanilamide alone or with the drug in various combinations with specific serum and complement. The procedure in the case reported by the essayist followed closely the method described by Finland with the exception that sulfapyridine was used instead of sulfanilamide. The procedure consisted of the following: (1) Complete and frequent drainage of the spinal fluid; (2) immediate institution and continuous use of large doses of sulfapyridine by mouth; (3) identification of the pneumococcus as rapidly as possible and the intravenous administration of the sufficient specific anti-pneumococcus serum to establish a balance of antibodies in the circulating blood; (4) moderate fluid intake by whatever route necessary to insure adequate amounts of spinal fluid for drainage; (5) about two hours after a reasonable dose has been given, blood is withdrawn from the patient and the serum rapidly separated; (6) following the removal of spinal fluid at the time of the next lumbar puncture, the blood is given intraspinally, from 10 to 5 cc. being sufficient. In small children and in infants it may be necessary to use fresh human serum from another source for complement and in that event only very small amounts of specific therapeutic serum need be added, from 0.5 to 1 cc.; (7) lumbar punctures are repeated until the fluid is normal; (8) transfusions are given if anemia develops and are repeated if necessary.

A case of type 14 pneumonia and meningitis in a one-year-old Mexican baby boy was reported treated as outlined, with complete recovery.

C. B. Alexander, in discussing the paper, reported a case in which recovery followed the administration of sulfapyridine alone. Dr. Alexander cautioned that the administration of sulfapyridine should not be stopped too soon.

Frank M. Martin states that the serum had been used intramuscularly in infants and children.

Lewis M. Helfer referred to a case of pneumococcus brain abscess cured either by sulfapyridine or spontaneously.

Other Proceedings.—The report of the pneumonia control committee read at the February 15 meeting was accepted.

Peter M. Keating reported for the publicity committee, and stated that the newspapers, forums, and Parent-Teacher Association had been contacting him in regard to various matters. Five lectures had been given in the past five weeks and three requests are in hand.

March 7, 1940

Lung Abscess—J. Emerson Daily, Houston.
Treatment of Subphrenic Abscess—George W. Waldron, Houston.

Bexar County Medical Society met March 7, in the Medical Library Building, San Antonio, with seventy-six members and seven visitors present. Herbert Hill, president, presided, and W. P. Stanton, program chairman, presented the scientific program as given above.

Lung Abscess (J. Emerson Daily).—Most lung abscesses result from aspiration. Any type of organism may be found in lung abscesses. Eight per cent contain anaerobic organisms. Collapse therapy is contraindicated. Lung abscesses heal spontaneously in from 15 to 20 per cent of cases. Medical procedures used in the treatment of lung abscesses include postural drainage, bronchoscopic lavage, arsphenamine therapy and administration of ether in oil, sulfapyridine, and sulfamethyl-thiazol. Surgical measures include either one-or-two-stage operative procedure. Empyema will follow the one-stage procedure if adhesions are not formed. Bronchoscopy is valuable for the removal of foreign bodies and permitting drainage, but not for treatment. Symptomatic treatment is of no value. Conservative treatment shows a poor prognosis, in that the mortality of cases so treated is from 25 to 75 per cent. Of cases treated surgically, 45 per cent of the patients recovered, and 41 per cent died, of which latter number some had empyema or bronchiectasis. Mortality of early cases treated surgically should be less than 5 per cent and cures should be 90 per cent. The best results in treatment of lung abscesses will be obtained when internists and surgeons work together, utilizing (1) postural drainage, (2) bronchoscopy for diagnosis, (3) sputum culture and use of specific drug, if available, and (4) early operation. It is not possible to apply a definite yardstick to the time when operation should be performed. Surgical treatment should be employed as soon as an abscess cavity can be demonstrated and localized on the *x*-ray film. Aspiration of the chest should not be done until one is sure that it is empyema and not lung abscess. Roentgenograms of lung abscess were shown before and after surgery.

Edward W. Coyle, in discussing the presentation, asserted that the two-stage operation is best and that lung abscesses should be operated on as soon as a cavity is demonstrated.

Merton M. Minter pointed out that the high mortality rates date back to days before specific drugs were developed. He asked why lung abscesses should be operated on immediately when recovery will occur in 20 per cent anyway.

Henry R. Hoskins stated that at least Dr. Daily does not operate in the stage of pneumonitis before abscess occurs and that his viewpoint is conservative for a chest surgeon. He stated that some patients who have evacuated pulmonary cavities will need surgery two to three months later.

Dr. Daily, in closing the discussion, stated that we drain other abscesses, such as appendiceal, rectal, brain and carbuncle, immediately, and why should we not drain pulmonary abscesses as soon as they are demonstrable just as an abscess anywhere else in the body? There are very few statistics available on cases treated with sulfamyethyl-thiazol. Sulfanilamide and sulfapyridine have been tried without much success.

Treatment of Subphrenic Abscess (George W. Waldron).—Roentgenographic diagnostic points include: (1) localized bulging into the diaphragm, (2) obliteration of the cardiohepatic angle, (3) obliteration of costophrenic angle. The treatment is surgical, with the avoidance of serous cavities as Ochsner has advised. Incision is made over the twelfth rib and then laterally from the spine of the first lumbar vertebra. Amebic abscesses should be aspirated for pyogenic organisms. If none are present, repeated operation should be done and antiamebic drugs should be administered. The aspirating needle should be inserted in the anterior axillary line below the tenth rib and the needle pointed back and laterally. If pyogenic organisms are found the abscess should be opened surgically and drained. Cases were reported and discussed. The principles of drainage away from serous cavities were illustrated. Surgery is not good for amebic abscesses which have ruptured through the diaphragm. Many subphrenic infections occur but do not require surgery.

A. M. Graves, in discussing the paper, emphasized the importance of extra serous drainage. He pointed out that subphrenic abscess is rarer in private than

in charity practice. About 70 per cent of subphrenic infections subside without going on to abscess. When an abscess is formed it should be opened as promptly as possible. Air under the diaphragm indicates perforation of a hollow viscus or a very late case.

Albert W. Hartman, Jr. stated that Dr. Ochsner's technique was followed very carefully. He asserted that subphrenic abscess cannot be diagnosed without the *x*-ray.

New Member.—Paul Q. Stansell was elected to membership.

E. W. Coyle submitted a proposed amendment to the by-laws regarding the dates of meeting of the Society.

Resolutions of condolence were adopted on the death of Mrs. R. G. McCorkle, wife of Dr. R. G. McCorkle of San Antonio.

Brown-Comanche-Mills-San Saba Counties Society

April 8, 1940

(Reported by S. W. Hughes, Secretary)

The Present Status of Transurethral Prostatic Resection—Edward White, Dallas.
Newer Chemotherapeutic Agents and Their Relation to the Urinary Tract—Ralph C. Smith, Dallas.

Brown-Comanche-Mills-San Saba Counties Medical Society met April 8, at Brownwood. The scientific program as given above was carried out, both papers being freely discussed by various members of the Society.

Mr. Vernon discussed hospital insurance.

The Society voted to send $1.00 per member to the National Physicians Committee for the Extension of Medical Service.

Cass-Marion Counties Society

March 13, 1940

(Reported by Felix Peebles, Jr., Secretary)

Cass-Marion Counties Medical Society elected the following officers for 1940 at its meeting, March 13: President, Felix Peebles, Sr., Jefferson; vice-president, A. J. Woods, Jefferson; secretary-treasurer, Felix Peebles, Jr., Jefferson; delegate, A. E. Starnes, Hughes Springs; alternate delegate, E. W. Grumbles, Atlanta; and members board of censors, J. I. Allen, Bloomburg; A. E. Starnes, Hughes Springs, and J. H. Campbell, Linden.

The legislative committee is composed of C. E. Davis, O. R. Taylor and E. W. Grumbles.

The public health committee is composed of the following: H. L. D. Jenkins, F. K. Laurentz, J. D. Hartzo, and J. D. Nichols.

The Society gave consideration to the proposed Federal government hospital building program and the consensus of opinion was that this is another step toward state medicine; that while it is understood that the staffs of such hospitals are to be composed of local physicians, once they are built it will not be long before the government would man them with its own staffs. The Society is opposed to state medicine and does not wish to become involved in anything which points in that direction.

Clay-Montague-Wise Counties Society

February 22, 1940

(Reported by W. T. Inabnett, Secretary)

Some Measures for the Relief of Pain—W. O. Ott, Fort Worth.
The Program of the State Medical Association—L. H. Reeves, Fort Worth.

Clay-Montague-Wise Counties Medical Society met February 22, with ten members present. The program as given above was carried out.

W. O. Ott, in discussing measures for the relief of pain, described the technique of procedure for alleviating various types of intractable pain, such as nerve injections, injections in the epidural space, nerve avulsions, and other procedures.

L. H. Reeves, president of the State Medical Association, gave a pleasing and informative address on the work accomplished during the present administration.

Dallas County Society

February 22, 1940

(Reported by W. W. Fowler, Secretary)

Obstructing Benign Polyp of the Ileum—C. O. Patterson, Dallas.
Congenital Bladder Neck Obstruction—John M. Pace, Dallas.
Cancer of the Breast—Frank Selecman, Dallas.

Dallas County Medical Society met February 22, in the Medical Arts Auditorium, with sixty-eight members present. Curtice Rosser, president, presided, and the scientific program as indicated above was carried out.

The case reported by C. O. Patterson was discussed by Sidney Galt. The address of John M. Pace was discussed by Edward White, and the address by Frank Selecman by J. H. McCracken, Davis Spangler, and Wayne T. Robinson.

New Members.—Gladys J. Fashena and Hillary Romines were elected to membership on application.

Everett C. Fox presented a proposed amendment to the by-laws, providing that an application for membership by transfer from another component society shall be referred to the board of censors for investigation and approval in a manner similar to original applications for membership.

Jo C. Alexander, chairman of the public health and legislative committee, presented the following report of that committee on a study of the Harger Breath Testing Apparatus (Drunk-o-meter):

"Upon the recommendation of the President of the Dallas County Medical Society, this Committee has made a careful examination of the Harger breath testing apparatus (Drunk-o-meter) with the objective of determining its accuracy in indicating degree of alcoholic intoxication.

"As a result of its examination, this Committee reports from its findings that the Harger breath testing apparatus (Drunk-o-meter) is thoroughly reliable and accurate in indicating the amount of alcohol in the blood of any subject. The absorption of alcohol into the blood is the determining factor in degree of intoxication, rather than the amount of alcoholic beverage which may have been imbibed by the person under examination. Those responding most rapidly to alcohol are those whose blood absorbs alcohol most quickly. Those persons who show a great tolerance for alcohol are those whose blood absorbs alcohol comparatively slowly. Therefore, a chemical analysis of the expired breath from lungs, as is provided by the Harger apparatus, is an accurate index to the amount of alcohol contained in the blood.

"The Committee finds that when chemical analysis of the breath indicates as much as .05 per cent of alcohol in the blood that the subject is under the influence of alcoholic drink. When chemical analysis of the breath indicates as much as .15 per cent of alcohol in the blood, the Committee finds that the subject is intoxicated to such an extent that there can be no reasonable degree of coördination between mental and physical faculties.

"It is the further recommendation of the Committee that, for legal purposes, in addition to such chemical evidence as is supplied by the Harger breath testing apparatus (Drunk-o-meter) be also shown clinical evidence supported by expert testimony from a member of the medical profession."

The report of the committee was unanimously adopted.

March 28, 1940

Gastro-jejunal Ulcer—A Sequel to Gastric Surgery—C. D. Bussey, Dallas.
Foreign Bodies in the Stomach as Observed Through the Flexible Gastroscope—M. O. Rouse and C. O. Patterson, Dallas.
The Treatment of Pneumonia with Sulfanilamide, Sulfapyridine, and Sulfathiazol—W. G. Reddick, Dallas.

Dallas County Medical Society met March 28, in

the Medical Arts Auditorium, Dallas, with ninety-two members and one visitor present. Curtice Rosser, president, presided and the scientific program as given above was carried out.

C. D. Bussey illustrated his paper on gastro-jejunal ulcer with diagrams exhibiting types of operation on the stomach, location of the ulcers, and so forth. The paper was discussed by Penn Riddle.

The paper of M. O. Rouse and C. O. Patterson was illustrated by lantern slides showing phytobezoars removed from the stomach after their location in that viscus with the gastroscope. Roentgenograms of phytobezoars in the stomach were also shown. The paper was discussed by George M. Underwood and Abell D. Hardin.

The address of W. G. Reddick on the treatment of pneumonia with sulfanilamide, sulfapyridine and sulfathiazol was discussed by G. E. Brereton, W. C. Browne, and Fred T. Rogers.

Resolutions of sympathy were adopted on the death of Dr. R. H. Lasater of Dallas.

The amendment to the by-laws, pertaining to the acceptance of transfers from other component county medical societies presented by Everett C. Fox at the last meeting was considered. It was pointed out that M. L. Wilbanks, Councilor of the Fourteenth District, had called attention to the fact that the proposed amendment would contravene the by-laws of the State Medical Association pertaining to the receipt of members by transfer.

Following discussion John G. Young moved that the proposed amendment be sent to Councilor M. L. Wilbanks with the request that he put it in proper shape for presentation to the House of Delegates at the annual session in May, with the request that it be given due consideration by that body. The motion was carried.

John G. Young moved that the society go on record as instructing delegates from the Society to vote for this change in the by-laws of the State Association.

New Member.—Sam J. Muirhead was received into membership on transfer from the Hardeman-Cottle-Motley-Foard Counties Medical Society.

John G. Young, chairman of the economic relations committee, stated that the committee was ready to report on the progress of its work to the present and asked George A. Schenewerk, chairman of the insurance section, to report for that section.

George A. Schenewerk gave an outline of the committee from its beginning and stated the reasons for the need of offering medical insurance to low income groups, presenting in detail the proposed plan of operation for such an organization under the supervision of the Society. The special features of the proposed program are: (1) freedom of choice of physician, (2) payment by the Association of fees for medical service. (3) The Association when properly authorized will pay cash benefits to any legally, qualified, ethical doctor of medicine. (4) The contract should have some form of deductable clause. (5) Association guarantees payment for medical service according to contract. (6) Laboratory work, and diagnostic procedures, also taken care of according to special fee schedule to be arranged by the Board of Directors. (7) Rates: (a) individual subscriber, $1.50 per month. (b) Husband and wife, $2.50 per month. (c) Individual and dependents, $2.30 per month. (d) Family, (husband, wife, and two or more dependents), $3.30 per month.

E. C. Fox then presented the following recommendations of the committee:

"That the Committee be authorized by the County Medical Society to enter into a contract with the Ford Motor Company, upon a plan whereby it can for a nominal fee per month, pay medical bills as they are incurred by this group consisting of about 1,200 men, giving them the free choice of physicians and all of the other private physician-patient relationships which the profession and the people are desirous of maintaining."

Dr. Fox stated that Bryce Twitty, administrator of Group Hospitalization Service, Inc., had agreed to operate the proposed plan for the Society on a twelve months basis, and it was intended that the plan be brought into effect within the next thirty to sixty days and that it would be used to experiment to determine the necessary fees for this type of medical care on a monthly prepayment basis. At the end of each year the fee basis may be increased, decreased or allowed to remain the same when the actuarial figures for one year are available. As soon as reliable actuarial figures are available the plan can be extended to other employed people.

M. S. Seely moved that the committee be authorized to represent the Society in a contract with the Ford Motor Company to put the plan into operation. The motion was seconded by G. E. Brereton and carried unanimously. During the discussion of the plan it was asserted that this form of medical insurance to low income groups should be operated under the supervision of the State Medical Association and made available to other groups throughout the state. It was voted that delegates from Dallas County be instructed to work for such a program during the meeting of the House of Delegates of the State Association in May.

A communication from the secretary of the Texas Pediatric Society was read, regarding the creation of a Section on Pediatrics of the State Association, and requesting support by the Society for the necessary amendment to effect the creation of the Section. John G. Young moved that delegates from the Society be instructed to vote for this change, which motion carried.

El Paso County Society

March 11, 1940

(Reported by M. P. Spearman)

Low Back Pain and Sciatica—E. W. Secord, El Paso.
Recent Advances in Otolaryngology—M. P. Spearman, El Paso.
Maternal Mortality—F. A. Snidow, El Paso.

El Paso County Medical Society met March 11, 1940, in the tea room of the Hotel Cortez, El Paso, and the scientific program as given above was carried out.

March 25, 1940

The Role of Gastroscopy in Private Practice: A Review of 100 Cases—C. N. Giere, El Paso.
Liver Function: Case Reports—J. Mott Rawlings, El Paso.

El Paso County Medical Society met March 25, at the Hotel Cortez, El Paso. The scientific program as given above was carried out.

April 8, 1940

Jaundice—Points in Diagnosis and Treatment—J. J. Gorman, El Paso.
Cancer—J. W. Cathcart, El Paso.

El Paso County Medical Society met April 8, at the Hotel Cortez, El Paso. The scientific program as given above was carried out.

Harris County Society

February 7, 1940

(Reported by James Pittman, Acting Secretary)

Case Report of Pyodermite Vegetans in a Child Six Years of Age—C. C. Verstandig.
The Modern Mastoid Operation (motion picture)—Sidney Israel, Houston.
Operative Procedures for the Care of Uterine Prolapse (lantern slides)—John A. Wall, San Antonio.

Harris County Medical Society met February 7, with sixty-six members and two visitors present. A. E. Greer, president, presided, and the scientific program as given above was carried out.

The paper of C. C. Verstandig was discussed by J. R. Martin.

THE MODERN MASTOID OPERATION (Sidney Israel).—There are a few things I would like to emphasize. I deny any claim for originating the use of the equipment. In some operations, the mechanics are more important than in others. This is true in orthopedics, especially, and it is certainly true of the mastoid operation. We should not be content to stay in the same fold, but should make progress, and we have made progress. We should keep our eyes and ears open and our hands busy. When using an electric drill, we must take every precaution to protect the patient. It has always seemed to me to be most brutal to use the chisel and hammer. We use sterile water to cool the surface while using the drill.

J. F. Gamble: It has been my good fortune to see some of these operations performed by Dr. Israel. I am becoming convinced that it is the coming method. I remember old Dr. Albee; he was very skillful with an electrically driven saw. Now I am thinking of taking up the use of burrs.

C. S. Alexander: It has also been my good fortune to see Dr. Israel perform some of these operations. There are three distinct advantages that come with using the burrs, one of which is the time element—burrs are very much faster than the chisel and hammer. Even with the sclerotic type, the burr comes through in almost the same time. Then there is the lack of traumatism; with the chisel and hammer we are not certain where the crack will be. The third advantage is in healing and from having clean, smooth bone which forms granulation readily. In all respects, it is a very superior method compared to what we have used before.

Dr. Israel, closing: I appreciate the remarks of the two discussers. I would suggest that the initial attempt not be made on a patient, but on a piece of wood. It is necessary to have a variety of burrs, too. After one becomes adept with the hands, he will feel free and confident with them. It is difficult to control the crack with the chisel and hammer, and after a short time the operator can control the burr much easier. The wound is much easier to dress after the burr operation. We have a traveling crane at Jefferson Davis Hospital, which enables us to take pictures from the surgeon's eye view; of course, I am expressing my views. This overhead traveling crane stands nine feet high and has a camera carrier which permits the camera to be placed in any consecutive position.

OPERATIVE PROCEDURES FOR THE CARE OF UTERINE PROLAPSE (John A. Wall).—

E. W. Bertner: I would like to express my personal appreciation of the very thorough examination Dr. Wall has made of the literature. Many women with this distressing condition are told that there is little help for them, or they are encouraged to wear some type of pessary and are not encouraged to present themselves to those who are able to take care of them. We are fortunate to have in Houston a most able and enthusiastic group of young surgeons who are able to take care of them. Slides were shown and discussed.

The paper was further discussed by E. O. Strassmann, Karl J. Karnaky and John T. Moore.

Dr. Wall, closing: I have nothing to add except that I wish to thank Drs. Bertner, Strassmann, Karnaky and Moore for their discussions.

February 7, 1940

Harris County Medical Society held an adjourned business meeting with sixty-six members and two visitors present.

A report from the hospital and legislation and public health committees, on the city ordinance pertaining to hospitalization of city employees, was read by the secretary and discussed by B. T. Vanzandt, Raymond Dawes, Edgar Lancaster, Herman Johnson, John T. Moore, Sidney Israel, and J. F. Gamble.

John T. Moore moved that the report be received, which motion was seconded by Herman Johnson and passed.

John T. Moore moved that the Society adopt the report with a modification, which motion was seconded by B. T. Vanzandt and carried.

The matter of membership in the Chamber of Commerce was presented for consideration on the request of the treasurer.

John T. Moore moved that the Society maintain one membership in the Houston Chamber of Commerce for the current year, which motion was seconded by P. H. Scardino.

Following discussion by John T. Moore, Alvis Greer, E. W. Bertner, J. T. Billups, L. C. Blair, and Edgar Lancaster, the motion carried.

February 14, 1940

The Chief Causes of Chronic Sciatica—Dean H. Echols, Assistant Professor of Surgery, Tulane Medical School, New Orleans.

Treatment of Burns—Neal Owens, Department of Plastic Surgery, Tulane Medical School, New Orleans.

Harris County Medical Society met February 14, with ninety-one members and three visitors. A. E. Greer, president, presided, and the scientific program as given above was carried out.

THE CHIEF CAUSES OF CHRONIC SCIATICA (Dean H. Echols).—

James Greenwood, Jr.: We are fortunate in having Dr. Echols speak to us as he is the outstanding authority on his subject. Dr. Echols' contribution to the treatment is that he cuts the posterior root inside the dura. I would like to ask Dr. Echols if there is any notable anesthetic for detecting anesthesia following this operation and also could there be any weakness? I think some of the members would be interested in an elaboration on the actual operation—in how he cuts the posterior root.

B. T. Vanzandt: I occasionally run across cases in which there is a lot of dense material in the lower spine and pelvic area. In each case, the patient has had lipiodol several years preceding the examination. Why not use the soluble lipiodols?

Dr. Bradford: The herniated nucleus pulposus of clinical significance is that which occurs beneath a nerve root; the same thing can occur at other points in the annulus fibrosus without causing sciatica. This brings sciatica into the same category with any other root pain. The intervertebral disk is permanently weakened after the nucleus pulposus is allowed to escape. I know that there is more to that problem than can be covered in a brief moment, but I would like to have Dr. Echols express his opinion in regard to spinal fusion in this condition, after the herniated material is removed.

Herbert F. Poyner: If sciatica is due to herniated nucleus pulposus, why is pain relieved by Obre's operation? Does Dr. Echols make any effort to remove lipiodol in those cases showing no herniation, and in those patients that are operated on, is there any attempt to remove the lipiodol? How does he explain the lower back pain as distinct from sciatica? How does he explain the fact that rest will cure the patients who come in and say that they have had back injuries?

J. A. Brown: This was a very interesting paper. Dr. Echols' percentage of cures seems rather high to me. I am wondering how many of his cases are industrial.

R. C. L. Robertson: I would like to ask Dr. Echols if he cuts routinely through the dura or through the intradura.

Dr. Echols, closing: Dr. Greenwood asked about technical details of the operation which I hesitate to discuss because of the time, but I can answer the

last question at the same time. My particular procedure is to go in between two arches and then remove some of the bone so that there will be enough room. The cartilage nodule is removed between the extradural space. If the disk is impacted, then I back out and open the dura in midline and cut the posterior fibers of that particular root. While I am there, the lipiodol is sponged away. It is not possible to remove all of it because some of it is caught between the fibers; however, nine-tenths of it is taken out. But ordinarily I do not take the trouble to remove lipiodol in my operations as it causes no later ill results—this is my opinion. It has been used a great deal in the last ten years on literally thousands of people and no ill results reported. Dr. Adson has used it and has never seen any bad results. There is little increase in pain during the acute stage while the roots are first in contact with this foreign substance. As to Obre's operation, I do not know why some people are relieved by this operation. If it does relieve them, then they never should have been subjected to lipiodol. Most of my cases are not industrial.

TREATMENT OF BURNS (Neal Owens).—

H. L. D. Kirkham: I agree with Dr. Owens entirely. The use of wet dressing and tub baths, since it has been made routine at Jefferson Davis Hospital, has cut the number of days in the hospital almost in half. Before that, the patients were treated in all sorts of ways, depending on who was in charge when they were admitted.

Herbert Poyner: I feel very much like Dr. Kirkham. I have, for some time, used tannic acid or silver nitrate, and the local treatment takes care of the local pathology. It does not take care of the real injury. The cause of the burn has much to do with the mortality. However, in second degree burns, there is no reason to abandon the use of tannic acid.

Dr. Owens, closing: I have no desire to get into an argument about the proper and only method of treating burns. I simply feel that the open drainage method has a decided advantage over the other methods in the treatment of severe cases. It is the determining factor in saving the patient's life. It removes the devitalized tissue quicker. In making statistics, it is necessary to go into many things. The remarks that I have made were directed principally towards cases with a large injured area of third degree burns. We can treat these cases like automobile accidents. Our concern is in the large third type.

Hunt-Rockwall-Rains Counties Society

February 13, 1940

(Reported by M. L. Wilbanks, Secretary)

Some Considerations of the Differential Diagnosis of Jaundice—E. R. Hayes.
Leukemia: Case Report—O. H. Trimble.

Hunt-Rockwall-Rains Counties Medical Society met February 13, 1940, at the Hotel Washington, Greenville, with T. C. Strickland, president, presiding. The scientific program as given above was carried out.

SOME CONSIDERATIONS OF THE DIFFERENTIAL DIAGNOSIS OF JAUNDICE (E. R. Hayes).—Jaundice was classified as hemolytic, toxic and obstructive, and according to some authority as retention and regurgitation jaundice as two types. The normal physiology of the biliary pigments was outlined. The application of urobilinogen studies upon the urine and feces was discussed as applied to the diagnosis of the cause of jaundice and to the division of the cases into medical and surgical.

The presentation of Dr. Hayes was discussed by Joe Becton, O. H. Trimble, W. P. Philips, M. L. Wilbanks, H. M. Bradford, J. F. Corry, and W. C. Morrow.

The paper of Dr. Trimble was discussed by E. T. Crim, T. C. Strickland, J. W. Ward, and W. C. Morrow.

Other Proceedings.—H. C. Wilson reported that the State Board of Health would soon have an *x*-ray diagnostic clinic available to all indigent patients and urged each doctor in the Society to avail himself of the advantages of the clinic.

J. W. Ward reported upon the call of the National Physicians Committee for the Extension of Medical Service for funds for the education of the public, thus combating the socialization of medicine.

J. W. Ward moved that the Society donate $15 to the National Physicians Committee, and that the Secretary canvass the membership and solicit funds. The motion carried.

Honorary Membership.—J. W. Benton and A. B. Moore were elected to honorary membership.

February 26, 1940

Hunt-Rockwall-Rains Counties Medical Society met in called session February 26, with twenty-six members present.

J. C. Cheatham reported on the refresher course. The Society voted to sponsor a refresher course in connection with the next regular meeting of the Society, with R. L. Grogan of Fort Worth, as lecturer on obstetrics and Robert L. Moore of Dallas, as lecturer on pediatrics.

W. M. Dickens, chairman, reported on the proposed venereal disease clinic.

J. W. Ward moved that the Society conduct a venereal disease clinic, which motion was seconded by Joe Becton. After discussion by Ed Becton and C. M. Jackson, the motion carried.

W. C. Morrow moved that a director for the venereal disase clinic be selected at this time by nomination from the floor. The motion was seconded by B. F. Arnold and carried. E. R. Hayes was elected.

March 19, 1940

Medication in Pregnancy.
Treatment of Puerperal Sepsis.
Toxemias.
Abortion.
—R. L. Grogan, Fort Worth.
Infant Feeding.
Immunization Procedures.
Vomiting in Infancy.
The Causes and Treatment of Convulsions in Children.
—Robert L. Moore, Dallas.

Hunt-Rockwall-Rains Counties Medical Society sponsored a refresher course for the Fourteenth Council District of the State Association, in the City Hall, Greenville, March 19. The scientific program, as given above was started at 9:30 a. m. and was completed at 10:00 p. m.

In addition to the scientific program listed, a round table discussion was conducted by the visiting guest speakers at a luncheon.

The refresher course was attended by more than forty physicians.

At a business meeting, Joe Becton moved that those in attendance record their sincere appreciation for the time and splendid presentations of the visiting lecturers, which motion was unanimously adopted. This course is one of three to be held in the Fourteenth Councilor District.

April 1, 1940

Hunt-Rockwall-Rains Counties Medical Society met April 1, at the Washington Hotel, Greenville, with fifteen members present. T. C. Strickland, president, announced the purpose of the meeting was to consider a resolution seeking a change in the present system of food handling, particularly in regard to milk. Because too few members were present to be representative of the Society, a resolution regarding the matters outlined in the announcement of the president as stated in the purpose of the meet-

ing was read, but action was deferred until a meeting was attended by a larger number of members.

Jefferson County Society

March 11, 1940

(Reported by W. Price Killingsworth, Secretary)

Myxedema: Case Report—S. J. Lewis, Beaumont.
Pelvic Tumor Mass: Case Report—T. A. Fears, Beaumont.
Abdominal Complications of Acute Appendicitis—Mims Gage, Assistant Professor Surgery, Tulane University School of Medicine, New Orleans.
Estrogenic Hormones (motion picture)—Representatives of Upjohn Company.

Jefferson County Medical Society met March 11, at St. Therese Hospital, Beaumont, with sixty-five members present. J. W. Long, president, presided, and the scientific program as given above was carried out.

The case of myxedema reported by S. J. Lewis occurred in a man who exhibited pertinent electrocardiographic and clinical findings that are present in about 65 per cent of cases of acquired myxedema.

The patient in the case reported by T. A. Fears was a man, age 63, whose complaint was low back pain and pain on urination. Physical and laboratory findings were essentially negative, but *x*-ray studies revealed a large calcified tumor mass in front of the promontory of the sacrum, pressing on the bladder. There were no *x*-ray changes in the pelvis in evidence. The case was presented for diagnostic suggestions.

Abdominal Complications of Acute Appendicitis (Mims Gage).—From 20,000 to 25,000 persons die each year in the United States of the complications of appendicitis. The majority of these deaths could be prevented by timely and early surgical intervention. The mortality of appendicitis and its complications is greater now than in 1900, according to the essayist. The mortality should be less than 1 per cent in simple appendicitis, less than 15 per cent in cases in which perforation or rupture occur; whereas these percentages are from 10 to 50 per cent, respectively. The use of laxatives in appendicitis almost invariably results in perforation and their use is decried. Appendicitis goes on to rupture in only 20 per cent of patients who have not used purgatives. After perforation or rupture has occurred the case is no longer one of simple appendicitis. Appendicitis may be divided into two main classes: (1) inflammatory and (2) obstructive. The various types—pelvic, retrocecal, retroperitoneal, and left sided, were reviewed. The principal complications of acute appendicitis were listed as: (1) peritonitis, further subdivided as (a) localized and (b) diffuse suppurative; (2) ileus, further subdivided as (a) mechanical and (b) adynamic; (3) residual abscesses; and (4) portal thrombophlebitis.

Peritonitis is the most frequent complication. Few if any patients recover from diffuse suppurative peritonitis. The signs of peritonitis are (1) abdominal pain and tenderness, (2) vomiting, (3) abdominal rigidity, and (4) distension. The pain usually spreads upwards and laterally and if it reaches the upper abdomen the prognosis is bad as it usually indicates the presence of diffuse suppurative peritonitis.

The treatment of peritonitis consists of the use of (1) Fowler's position; (2) continuous duodenal and gastric suction; (3) nothing by mouth; (4) the use of the Miller-Abbott tube; (5) adequate morphine administration to preserve gut tone; (6) the application of heat to the abdomen to contract the somatic vessels, the ice bag being contraindicated; (7) carbon dioxide inhalation to combat anoxemia and to reduce the nitrogen content of the blood, and (8) the giving of fluids and electrolytes by phleboclysis or hypodermoclysis. Five per cent glucose is given in Ringer's solution and is best given in the axilla and not under the breast.

Adynamic ileus is defined as cession of peristalsis or loss of gut tone due to marked stimulation of splanchnic nerves. The signs and symptoms of ileus are: (1) vomiting, (2) abdominal distension, (3) tympanites, (4) absence of peristaltic sounds—the silent abdomen, and (5) blood changes, such as (a) dehydration, (b) hypochloremia, (c) hypopotassemia, and (d) numerous fluid levels as demonstrated by *x*-ray study.

The treatment of ileus consists of (1) heat to the abdomen; (2) continuous duodenal and gastric suction, with the Miller-Abbott tube and the Wangensteen procedure; (3) administration of fluid, Hartmann solution or Ringer solution with 5 per cent glucose, intravenously or subcutaneously; (5) adequate morphine, and (6) administration of adrenal cortex (eschatin).

Mechanical ileus differs from the adynamic form in that it is caused by bars of fibrinous exudate which produce kinks in the gut. The signs and symptoms are much the same as adynamic ileus except that the pain is colicy and cramp-like in character and there is an increase in the peristaltic sounds of the abdomen. The Miller-Abbott or Wangensteen procedure must be used carefully, as there may be a gangrenous spotted bowel and rupture may be produced by the passage of the tube.

The treatment of mechanical ileus is the same as for the adynamic form, except that many cases may need operative relief of obstructing bands. Patients with both types of ileus tend to become hypoproteinemic, which should be combated and relieved by repeated small transfusions.

The order of sequence of residual abscesses as the third major complication of appendicitis was given as follows: (1) right iliac (ileocecal), (2) cul-de-sac, (3) subphrenic, and (4) left sided.

The signs, symptoms, and treatment of abscesses in the various areas designated were detailed.

The fourth major complication of appendicitis considered—portal thrombophlebitis, which is nearly always fatal—fortunately is rare. In the presence of this condition there is persistent evidence of systemic infection, chills and fever, and jaundice. Multiple liver abscesses nearly always result. Treatment measures discussed included: (1) prevention, (2) ligation of portal radicals, (3) retro and preperitoneal drainage of abscess, and (4) ligation of the ileocolic vein.

John Hart, in discussing the paper, reviewed the phases of operation in peritonitis and the dangers in the use of the Miller-Abbott tube. He cautioned that in large bowel obstruction the tube should not be passed too rapidly.

Max Knight discussed abdominal incisions and their relationship to the prevention of abdominal complications in acute appendicitis. He also discussed the value of spinal anesthesia and early feeding in uncomplicated cases. He pointed out that pain in the right shoulder is a constant finding in cases of diaphragmatic abscess, and asked how drainage was to be employed in cases in which rupture had occurred.

Dr. Gage, in closing the discussion, asserted that the duodenal tube should be used early in peritonitis and ileus and the Miller-Abbott tube later, especially if the patient has had cathartics. The tube should be passed about six inches each one-half hour, to avoid kinking. He gave as his preference the Davis incision, stating that he rarely uses the McBurney and never the right rectus. He expressed the opinion that, "when in doubt do not drain." He advised sewing up of the peritoneum, leaving the abdominal wound open; that one cannot drain the abdominal cavity, and that the only time drainage is indicated is when a frank abscess cavity is opened.

Other Proceedings.—Walter Brown discussed the

aims and objectives of the National Physicians Committee for the Extension of Medical Service in its fight against socialized medicine and moved that the secretary be instructed to send this organization a check for $25 in support of its work, which motion was seconded by L. C. Powell and carried unanimously.

Resolutions of sympathy were adopted on the death of Dr. D. P. Harris and Dr. W. W. Dunn, both of Beaumont.

Potter County Society

February 12, 1940

Hypogonadism: Report of Two Cases—W. R. Klingensmith, Amarillo.
Peripheral Vascular Failure (Shock)—Truman C. Terrell, Fort Worth.

Potter County Medical Society met February 12, in the Assembly Room of the Fisk Building, Amarillo, with twenty-one members and eleven visitors present. J. H. Vaughn, president, presided, and the scientific program as given above was carried out.

HYPOGONADISM: REPORT OF TWO CASES (W. R. Klingensmith).—Two cases were reported and the use of gonadogen and other treatment methods were discussed.

W. J. Shudde reported cases of hypogonadism and discussed treatment, both mechanical and hormonal.

PERIPHERAL VASCULAR FAILURE (Truman C. Terrell).—The literature was reviewed. Hypertension of the capillaries and more blood in the liver has been found in experimental work. The significance of histamine was discussed. Coramine was found to be the best drug to be used for treatment, and transfusions were considered valuable. The use of stimulants and fluids was discussed and emphasis was placed on the fact that after the use of stimulants and fluids the patient should be carefully watched.

W. J. Shudde discussed saline and blood transfusions and evaluated the estimation of hemoglobin and the red cell count.

The paper was further discussed by W. R. Klingensmith and W. Wilson.

Dr. Terrell, in closing, emphasized the value of transfusions and discussed the cases which were suitable for administration of whole blood. Shock from hemorrhage and trauma was also discussed. Histaminase was recommended from an allergic standpoint.

New Members.—Kenneth Flamm and Dr. Wertz were elected to membership on application.

N. C. Prince, B. T. Blackwell, and J. R. Carroll were appointed members of an entertainment committee for the meeting of the Panhandle District Medical Society to be held April 9 and 10.

March 11, 1940

Why Have Diphtheria—M. L. Fuller, Amarillo.
Fungus Diseases of the Southwest—Leslie M. Smith, El Paso.

Potter County Medical Society met March 11, in the Assembly Room of the Fisk Building, Amarillo, with twenty-three members and seven visitors present. A. J. Streit, vice-president, presided, and the scientific program as given above was carried out.

WHY HAVE DIPHTHERIA (M. L. Fuller).—Statistics were given as to prevalence of the disease and the mortality rate. Contacts and the use of toxoids were discussed.

J. R. Lemmon emphasized vigilance in cases of diphtheria. Prophylaxis and prevention were discussed; three doses of toxoid instead of one were advocated. The relationship to the Schick test in the following years was discussed.

George M. Cultra stated that one-half cc. doses generally marketed by manufacturing concerns are not adequate. Proper dosage should be 2 cc. instead of 3 cc. as sometimes given.

R. P. Jarrett asked as to the usefulness of toxoid and tetanus antitoxin combined.

Dr. Fuller, in closing, emphasized uniformity in doses.

FUNGUS DISEASES OF THE SOUTHWEST (Leslie M. Smith).—A resume of the importance and prevalence of fungus diseases of the Southwest was given. The difficulty of diagnosis of the various classifications of fungi was pointed out. The author discussed chronic lesions and the type that might be caused by fungi or in which fungi might be present with other infection.

David M. Marcley discussed Coccidioides.

J. R. Lemmon asked about the *x*-ray treatment of fungous infection.

The paper was further discussed by J. H. Robberson and W. R. Klingensmith.

Dr. Smith, in closing, discussed the treatment of epidermophytosis. *X*-ray is beneficial in the treatment of fungous lesions if they are not too acute. The value of iodides was discussed.

New Members.—J. W. Gustin and W. O. Murphy were elected to membership on application.

Tarrant County Society

March 19, 1940

(Reported by Craig Munter, Secretary)

An Evaluation of Parenteral Fluid Therapy—J. W. Tottenham, Jr., Fort Worth.
The Local Tuberculosis Situation—John Potts, Fort Worth.
Some Results of Preoperative Radiation of Breast Cancer—E. V. Powell, Fort Worth.

Tarrant County Medical Society met March 19, in the Medical Arts Auditorium, Fort Worth, with seventy-three members and five visitors present. The scientific program as given above was carried out.

The presentation of Dr. Potts was discussed by R. H. Needham, Harold M. Williams, Burke Brewster and Sim Hulsey.

R. H. Needham, chairman of the "Early Diagnosis Campaign" committee, introduced the secretary of the Fort Worth-Tarrant County Tuberculosis Society, Miss Sula Fleeman, who gave a brief talk.

The paper of Dr. Powell was discussed by T. H. Thomason, T. C. Terrell, Haywood Davis, and Charles H. Harris.

Other Proceedings.—President Godley presented to the Society the matter of a pneumonia control clinic in Tarrant County.

After discussion, A. Antweil moved that the president appoint a committee to study the pneumonia control program and report its findings to the Society, which motion was seconded by E. L. Howard and carried.

President Godley appointed the following pneumonia control committee: DeWitt Neighbors, chairman, Will S. Horn, Joe F. McVeigh, T. C. Terrell, K. H. Beall, Burke Brewster and W. B. Nies.

Burke Brewster, city health officer, distributed folders furnished by the Texas State Dental Society in collaboration with the State Health Department on "The Effects of Fluorine Contaminated Water on the Teeth of Growing Children."

The attendance prize, a radio, was won by E. G. Schwarz.

April 2, 1940

Prenatal Blood Changes—R. L. Grogan, Fort Worth.
Professional Liability Insurance—H. V. Shank.
Work Program of the Fort Worth City Health Department—Burke Brewster, Fort Worth.

Tarrant County Medical Society met April 2, with fifty-three members and five visitors present.

The paper of R. L. Grogan was discussed by C. P. Hawkins, W. G. Phillips and Giles W. Day.

The paper of Mr. Shank was discussed by W. G. Phillips, Horace Kibbie, E. V. Powell and Harold Shelley.

Craig Munter moved that the Society go on record as endorsing the work program of the Fort Worth

City Health Department, which motion was seconded by W. G. Phillips and carried.

William L. Howell, chairman of the committee of chemical tests for alcoholic intoxication, gave the report of that committee approving the Harger "Drunk-o-Meter" and several other tests.

William L. Howell moved that the report be adopted, which motion was seconded by W. C. Tatum and carried.

DeWitt Neighbors gave the report of the pneumonia control committee and moved its adoption. The motion was seconded by O. R. Grogan and carried.

The attendance prize, a croquet set, was won by Craig Munter.

AUXILIARY NOTES

Officers of the Woman's Auxiliary to the State Medical Association of Texas; President, Mrs. S. H. Watson, Waxahachie; honorary life president, Mr. A. C. Scott, Sr., Temple; president-elect, Mrs. Scott C. Applewhite, San Antonio; first vice-president, Mrs. P. R. Denman, Houston; second vice-president, Mrs. Q. B. Lee, Wichita Falls; third vice-president, Mrs. D. F. Kerbow, Paris; fourth vice-president, Mrs. J. Frank Clark, Abilene; recording secretary, Mrs. W. A. Minsch, Sanatorium; corresponding secretary, Mrs. T. G. Estes, Waxahachie; treasurer, Mrs. L. Barton Leake, Temple; publicity secretary, Mrs. C. O. Terrell, Fort Worth; and parliamentarian, Mrs. H. Edward Roensch, Bellville.

AUXILIARY NEWS

Baylor-Knox-Haskell Counties Auxiliary met April 16, at Munday, following a joint dinner with members of the Baylor-Knox-Haskell Counties Medical Society.

Officers for the ensuing year were elected as follows: President, Mrs. J. W. Foy; vice-president, Mrs. I. F. Hudson; secretary, Mrs. D. C. Eiland; delegate, Mrs. J. W. Foy; and alternate delegate, Mrs. D. C. Eiland.—Mrs. I. F. Hudson.

Bowie-Miller Counties Auxiliary met March 22, at the home of Mrs. L. J. Kosminsky, Texarkana. Cohostesses with Mrs. Kosminsky were Mrs. P. H. Phillips, Ashdown, and Mrs. J. F. Williams and Mrs. A. G. Lee, Texarkana.

Mrs. Ralph Cross, president, directed the business session, during which delegates were elected to the Arkansas State Auxiliary meeting in Fort Smith, Arkansas, April 15-17, as follows: Mrs. Ralph Cross, Mrs. L. J. Kosminsky, and Mrs. P. H. Phillips. The following delegates were elected to the Texas Auxiliary meeting in Dallas, May 14-16: Mrs. S. A. Collom, Jr., Mrs. Ralph Cross, and Mrs. William Hibbitts.

At the conclusion of the business meeting, Mrs. Chester Kitchens, chairman of the health committee, introduced the winners in the essay contest on the conservation of vision, held annually in the junior high schools of Texarkana. The winners were each awarded cash prizes by the Auxiliary. At the conclusion of the program a salad course was served.—Mrs. W. Decker Smith.

Dallas County Auxiliary entertained with a colonial luncheon April 3, at the Dallas Country Club as their annual guest day event. Guests were greeted by members in colonial costumes, and following the colonial luncheon, a program with a southern theme was presented.

Mrs. L. S. Thompson, president, extended greetings and introduced special guests from the various women's organizations of Dallas, as follows: Mrs. Robert K. Gaston, Woman's Club; Mrs. C. Vanderwoude, Woman's Forum; Mrs. Reuben Jackson, Dallas Federation of Women's Clubs; Mrs. J. H. Black, Mary K. Craig Class; Mrs. Robert Barton, Standard Club; Mrs. J. Cleo Thompson, Lawyers' Wives; Mrs. Fred Florence, Bankers' Wives; Mrs. James M. Pattee, Dentists' Wives; Mrs. G. E. Brereton, Women of Rotary; Mrs. John O. McReynolds, founder of the Dallas County Medical Auxiliary; Mrs. Curtice Rosser, wife of the president of the Dallas County Medical Society; Mrs. Allena Duff James, Dallas fashionist; Mrs. Ramsay Moore, president-elect of the Auxiliary, and Mrs. J. Frank Carman, chairman of philanthropy in the Auxiliary.

Mrs. George K. Wassell, Jr., gave a talk on Williamsburg, illustrated with lantern slides.

Little girls in colonial costumes danced a minuet.

An attractive antique exhibit of Williamsburg originals, many being from England and shown for the first time, was displayed.

Mrs. J. H. Marshall, chairman, presented the report of the nominating committee, following which officers for the new year were elected as follows: President, Mrs. Ramsay Moore; president-elect, Mrs. H. Frank Carman; vice-presidents, Mrs. B. J. Berger, Mrs. James T. Montgomery and Mrs. E. M. Dunstan; recording secretary, Mrs. John V. Goode; corresponding secretary, Mrs. John E. Ashby; treasurer, Mrs. C. O. Patterson; publicity, Mrs. Robert L. Moore; historian, Mrs. U. P. Hackney; and parliamentarian, Mrs. W. B. Carrell.

Plans were announced for a garden party May 10, to be given by Dr. and Mrs. L. S. Thompson of Dallas.—Mrs. Earl L. Carter.

McLennan County Auxiliary met February 28, at the home of Mrs. F. F. Kirby, Waco, with Mesdames J. L. Kee, E. L. Wedemeyer, J. L. Burgess, Leslie Sadler, Irwin Colgin, H. J. Germany, P. C. Pluenneke, and Ed Smith as assistant hostesses.

Mrs. J. L. Kee, program chairman, presented vocal numbers and dialect readings by local artists.

The Auxiliary voted to sponsor an essay contest on the subject, "How to Prevent Contagious Diseases," for high school students, with $5 as the prize award.

The Auxiliary also voted its approval of the cancer control program. Three of its members are officers in the McLennan County organization, namely, Mrs. F. F. Kirby, captain; Mrs. H. R. Dudgeon, co-captain, and Mrs. C. H. Reese, secretary-treasurer.

Special guests at the meeting were eight ladies, wives of members of the U. S. Veterans Hospital Staff at Waco, who will become associate members during the ensuing year.

At the conclusion of the meeting, a tea hour was enjoyed, with Mesdames S. L. Witcher and V. D. Goodall pouring coffee and tea.—Mrs. Ernest Johnson.

Tarrant County Auxiliary honored its retiring president, Mrs. H. S. Renshaw, at a tea at the home of Mrs. Truman C. Terrell, Fort Worth, April 12, with past-presidents as hostesses.

The following past-presidents were in the receiving line: Mrs. T. C. Terrell, Mrs. Frank Boyd, Mrs. Kent V. Kibbie, Mrs. Edwin Davis, Mrs. S. A. Woodward, Mrs. J. D. Covert, Mrs. T. M. Jeter, Mrs. W. R. Thompson, Mrs. A. B. Pumphrey, and Mrs. W. F. Armstrong. Mrs. H. S. Renshaw, president; Mrs. Joseph McVeigh, president-elect; Mrs. W. G. Phillips, past president of the Thirteenth District, and Mrs. C. O. Terrell, State publicity chairman, were also in the receiving line.

Mrs. Renshaw and Mrs. McVeigh presided at the silver service.

Tom Green Eight County Auxiliary met April 1, at the home of Mrs. J. B. McKnight, Sanatorium, with seventeen members present.

Mrs. D. D. Wall, president, presided at a business session during which reports of the year's activities were read by Mrs. William Grady Mitchell, secretary.

Mrs. Victor E. Schulze and Mrs. Jerome H. Smith were elected delegates to the State Auxiliary meeting in May, and Mrs. Harlan Horney and Mrs. D. D. Wall were elected alternate delegates.

Mrs. Stanley M. Richmond and Mrs. A. S. McGee were elected to membership.

Mrs. Wall presented Mrs. Mitchell, who introduced her corps of officers and announced committees for the year.

Officers for the new year include Mrs. William G. Mitchell, president; Mrs. Harlan Horney, first vice-president; Mrs. B. T. Brown, second vice-president; Mrs. J. A. Bunyard, secretary; Mrs. J. Valton Sessums, treasurer; Mrs. Jerome H. Smith, parliamentarian; and Mrs. Lewis K. Tester, publicity secretary.

Committees are: *Social*—Mrs. Victor E. Schulze and Mrs. D. D. Wall; *yearbook and program*—Mrs. C. R. Potts, Mrs. B. T. Brown, and Mrs. J. B. McKnight; *projects*—Mrs. R. M. Finks, Mrs. J. A. Bunyard, and Mrs. J. S. Hixson; *physical examinations*—Mrs. B. T. Brown; *membership*—Mrs. Harlan Horney; *Hygeia*—Mrs. Aubrey L. Lewis; *telephone*—Mrs. Marvin Rape and Mrs. Leon Hutchins; *public relations*—Mrs. C. T. Womack.

Wichita County Auxiliary members were entertained at a morning coffee at the home of Mrs. J. E. Kanatser, April 9. Assistant hostesses for the affair were Mesdames George J. Seibold, R. L. Hargrave, Q. B. Lee, J. B. Nail, H. D. Prichard, L. D. Parnell, J. A. Johnson, Wallace Masters, D. R. Venable and R. L. Nelson.

Mrs. Roland Knox gave a reading entitled, "Portrait of a Lady," by T. S. Elliot.

Musical numbers were given by Charles Kiker, pianist.

Mrs. W. P. Lowry, vice-president, presided at the silver service during the social hour following the program.—Mrs. J. A. Little.

The Northwest Texas (Thirteenth) District Auxiliary elected the following officers at its meeting in Fort Worth, April 10: President, Mrs. R. G. Rogers, Decatur; president-elect, Mrs. C. L. Jackson, Ranger; vice-president, Mrs. H. E. Griffin, Graham; secretary-treasurer and publicity director, Mrs. Craig Munter.

OBITUARY NOTICE

Mrs. S. P. Rice of Marlin, wife of the late Dr. S. P. Rice, a former president of the State Medical Association, died March 13, 1940. Mrs. Rice was a native Texan and received her education in this state, Tennessee Woman's College and Wesleyan College in Virginia, from which latter institution she was graduated with honors after majoring in instrumental music. She had contributed materially to the cultural, religious and social life of her home city. Mrs. Rice's surviving daughter, Mrs. Evelyn Hutchins, is now president of the Falls County Auxiliary.

BOOK NOTES

[1]**Lane Medical Lectures**: Viruses and Virus Diseases. By Thomas M. Rivers, M. D., Sc. D. Director, Hospital of the Rockefeller Institute for Medical Research, New York City. Cloth, 128 pages. Price, $2.50. Stanford University Press, Stanford University, California, 1939.

This monograph includes a series of five lectures given as the twenty-seventh course of the Lane Memorial Lectures of Stanford University School of Medicine. In three of these addresses Dr. Rivers ably discusses the pathology, the immunology and serology, and the treatment and prevention of virus diseases. In a fourth lecture he deals in some detail with the nature of the viruses. A fifth completes the series with a very interesting discussion of the new virus disease, lymphocytic choriomeningitis. Careful case records are used to illustrate many of his important points. There are excellent photomicrographs in several of the lectures and one must especially commend those of the choroid plexus of monkeys previously inoculated with lymphocytic choriomeningitis virus.

It is somewhat interesting to note that Paul's work on smallpox virus is mentioned, yet there is no attention whatsoever devoted to the practical application of the Paul test as an aid in the differential diagnosis of smallpox. Rivers' conjectures regarding the transitory immunity produced by the virus of the common cold are most challenging. Unfortunately, the limitations of the memorial lectures method preclude extended discussion of some of the most interesting subjects in the field of virus diseases. For example, the discussions of the viruses causing certain benign and malignant neoplasms are very fleeting and simply stimulate the reader to seek further information on this fascinating branch of a most fascinating subject.

[1]Reviewed by John J. Andujar, M. D., Fort Worth, Texas.

[2]**Virus and Rickettsial Diseases with Especial Consideration of their Public Health Significance.** A Symposium held at The Harvard School of Public Health, June 12-17, 1939. Cloth, 907 pages. Price, $6.50. Harvard University Press, Cambridge, Massachusetts, 1940.

Every student interested in virus and rickettsial diseases should read the symposium prepared by The Harvard School of Public Health. This classic on the infectious diseases caused by viruses and rickettsiae represents the accumulation of present conceptions and knowledge of leading men in the research field. It should be studied carefully by every public health worker and research student.

The volume includes numerous papers by various authors and the material is presented as a series of essays. Virus diseases are discussed epidemiologically. The physical and chemical properties of the infectious agent, immunology of infections, and insect vectors are reviewed.

Smallpox, measles, mumps, dengue fever, lymphogranuloma inguinale, virus diseases of the respiratory tract, rabies, equine encephalomyelitis, lymphocytic chorio-meningitis, yellow fever and louping ill are covered in detail.

It seems that with the advent of the newer methods of tissue culture, namely, the chick embryo and chick membrane culture, a new tool has been placed in the hands of workers in the field of virus diseases which has already made possible great accomplishments.

A general survey of the rickettsial diseases is made with a discussion of clinical diagnosis, epidemiology and immunology as well as an attempted classification of this unusual group of diseases.

[2]Reviewed by S. W. Bohls, M. D., Austin, Texas.

[3]**Fundamentals of Biochemistry in Relation to Human Physiology.** By T. R. Parsons, B. Sc. (Lond.), M. A. (Cantab.), Sidney Sussex College, Cambridge. Cloth, 461 pages. Price, $3.00. Sixth edition. William Wood and Company, Baltimore, 1939.

The record of six editions and a total of nine printings between the years 1923-1939 is an index of the popularity of this elementary textbook of biochemistry. The subject matter, divided into twenty chapters, is presented logically and concisely. As a mark of recognition of the importance of sterols and steroids, the author has inserted a separate chapter devoted to the subject. In other respects, the book follows closely the pattern of previous editions.

Apt quotations at the head of each chapter, and elsewhere, reveal Parsons' qualities as a scholar. The book deserves the consideration of those who

[3]Reviewed by M. Bodansky, M. D., Galveston, Texas.

have need for a brief text limited to the general aspects of the subject.

[4]Fractures. By Paul B. Magnuson, M. D., F. A. C. S. Cloth, 465 pages. Third edition. Price, $5.00. J. B. Lippincott Company, Philadelphia, 1939.

The third edition of this author's book is for all practical purposes very much like the other two. Some of the new methods of treatment are included, and the section on the treatment of fractures of the neck of the femur is considerably elaborated. The book in general is designed primarily for the general surgeon and deals more with principles of treatment than with specific methods of treatment. There is an occasional section, however, that goes into some detail as to the author's favorite method of treatment. All through the book in the treatment of fractures in general a great deal of stress is laid on muscle pull and on the importance of taking this into consideration. There is a relatively short general section in the book dealing with fundamentals in which there is a good discussion of the emergency treatment of fractures and a short section on the use of metal plates in internal fixation.

The author of this review, being a Texan, noted the omission of any mention of vitallium, the alloy whose use in bone surgery was introduced by Venable and Stuck.

There is a relatively good sized section on the treatment of skull fractures and another part of the book deals with physiotherapy in connection with fractures. The great bulk of the book is devoted to the treatment of specific fractures which are considered in anatomical order in a very satisfactory fashion. The author does not use the Kirschner wire for traction as much as it is generally employed. He usually prefers "ice tongs" or sometimes adhesive instead. However, except for minor variations of this type, the book would seem to be a very good one for the general practitioner. At the end of the book there is a long (thirty-one pages) and very good bibliography of the subject of treatment of fractures arranged by regions.

[4]Reviewed by Louis W. Breck, M. D., El Paso, Texas.

DEATHS

Dr. Edwin Louis Byrd of Aransas Pass, Texas, died December 29, 1939, of coronary sclerosis.

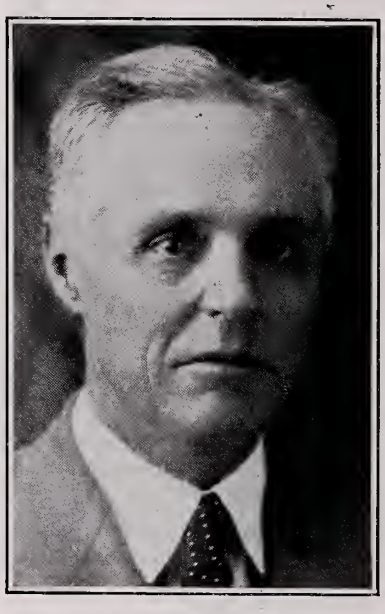
Dr. Byrd was born September 21, 1873, in Rusk, Texas, the son of William Louis and Mary Priest Byrd. His preliminary education was received in the public schools of Rusk. His medical education was obtained in the University of Nashville, Nashville, Tennessee, from which he was graduated in 1906. He began the practice of medicine at Aguascalientes, Mexico, where he was assistant surgeon for the Mexican Central Railroad Hospital for several years. He later served as surgeon of the Mexican Central Railroad Hospital at Monterrey, Mexico, following which he removed to Coahuila, Mexico, where he was United States Consular Agent and physician for the Del Carmen Mining Company at Boquillas. He then moved to Necaxa, Mexico, where he was physician for the Mexico Power and Light Company for several years. In 1917, Dr. Byrd located in Clint, Texas, where he was local surgeon for the Southern Pacific Railroad. In 1938, he removed to Aransas Pass, which was his home for the remainder of his professional life.

After his location in Texas, Dr. Byrd was a member continuously in good standing from 1918 until his death in the State Medical Association and American Medical Association, first through the El Paso County Medical Society, while residing at Clint, and through the San Patricio-Aransas-Refugio Counties Medical Society after his removal to Aransas Pass.

Dr. Byrd is survived by his wife, formerly Miss Clara Brown of Tucson, Arizona, to whom he was married November 10, 1909. He is also survived by a daughter, Miss Clara Byrd, Ysleta, Texas; a son, Edwin Louis Byrd, and two sisters, Mrs. A. R. Odem of Rusk and Mrs. E. Dempsey of Paris.

Dr. C. E. Chandler of Hamilton, Texas, died March 26, 1940, at his home in that city of heart disease.

Dr. Chandler was born February 9, 1886, in Smiley, Texas, the son of Oren and Nancy Chandler. His preliminary education was received in the schools of his community. His medical education was obtained in the Memphis Hospital Medical College, Memphis, Tennessee, from which he was graduated in 1908. After his graduation he had lived and practiced in San Antonio and Shive, Texas, and for one year in old Mexico prior to his location in Hamilton. During the World War he served as a Captain in the Medical Corps of the United States Army, being stationed with an aviation division at Ellington Field, Houston. In 1921 he located in Hamilton, Texas, which was his home for the remainder of his professional life.



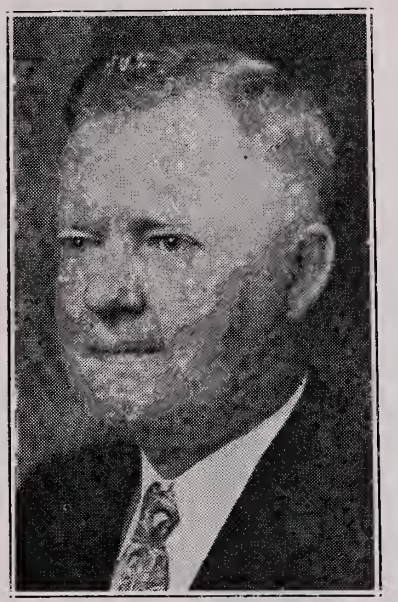
DR. C. E. CHANDLER

Dr. Chandler was a member of the State Medical Association and American Medical Association for many years through the county medical societies of his various places of residence. He was also a member of the Texas Railway Surgeons Association and local surgeon for the Cotton Belt Railway. With Dr. Charles C. Cleveland and the late Dr. D. B. Beach he was co-founder of the Hamilton Sanitarium in 1925. In addition to a large general practice, he had rendered worth while civic service to his community. He served Hamilton County as health officer from 1927 until his voluntary retirement from that office in 1939. He had served as city health officer since March, 1936, until his death. He was for many years a member of the Hamilton school board. At the time of his death he was serving as chairman of the Board of Pardons and Parole of the district of the State in which he lived. He was examiner for the State Highway Department for a number of years. He was a member of the Baptist Church and a Mason.

Dr. Chandler is survived by his wife, formerly Miss Mamie Williams of Hamilton County, to whom he was married May 9, 1918. He is also survived by two daughters, Charlene and Alyce Joyce Chandler; one sister, Mrs. W. B. Kerr, San Antonio; and two brothers, H. H. Chandler and H. W. Chandler, both of Smiley, Texas.

Dr. Joseph Edwin McDonald of Kerrville, Texas, Died March 8, 1940, in a San Antonio hospital, of heart disease.

Dr. McDonald was born April 6, 1893, in San Antonio, Texas. His academic education was received in the public schools of that city and the University of Texas at Austin. His medical education was obtained in the medical department of the University of Texas, Galveston, from which he was graduated in 1917. After his graduation he served an internship in the Robert B. Green Hospital in San Antonio, following which he entered the Medical Corps of the United States Army, being assigned to duty with the 48th Coast Artillery with which he served in France until the Armistice was signed. At the conclusion of the war, Dr. McDonald located in Kerrville, Texas, in 1919, which was his home for the remainder of his professional life.



DR. J. E. McDONALD

Dr. McDonald was a member of the Kerr-Kendall-Gillespie-Bandera Counties Medical Society, State Medical Association, and American Medical Association continuously in good standing from 1921 until his death. He had served his county medical society as president in the year 1924-1925. He was city physician for Kerrville for several years. He had given unstintingly of his professional service to the poor and in various types of health programs. He was a charter member of the Garrett-Baker Post of the American Legion and the Kerrville Rotary Club. He was also a member of the "40 & 8." He took special interest in Masonic work, being a Royal Arch Mason, a past master of his Blue Lodge and a district deputy at one time. He was considered one of Kerrville's most useful citizens and successful physicians, and his untimely death was a shock to his community.

Dr. McDonald is survived by his wife, formerly Miss Lillian S. Williamson, to whom he was married April 21, 1928. He is also survived by two sons, Joseph Edwin McDonald, Jr., and Charles Edward McDonald, and one brother, Arthur K. McDonald, San Antonio.

Dr. J. M. Gober of Beaumont, Texas, died March 21, 1940, in a Beaumont hospital, of injuries received in an automobile accident.

Dr. Gober was born July 4, 1866 in Banner, Mississippi, the son of Louis and Sarah Gober. His preliminary education was received in the schools of that state, and his medical education in the Kentucky School of Medicine, from which he was graduated in 1894. He had later taken postgraduate work at Tulane University, New Orleans. Shortly after his graduation he began the practice of medicine in Matagorda, Texas, where he remained for seven years. He then located in Beaumont where he had been in the general practice of medicine and surgery for the past forty years.

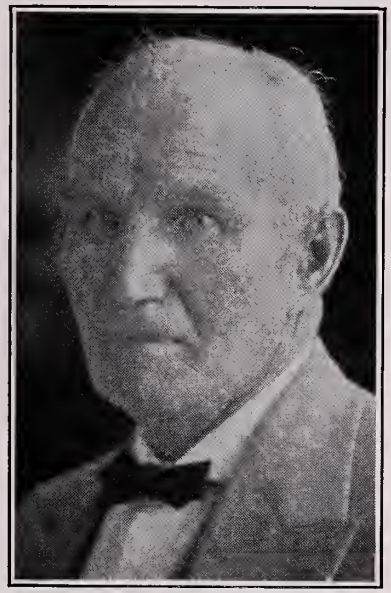
Dr. Gober was a member of the Jefferson County Medical Society, State Medical Association, and American Medical Association continuously in good standing from 1904 to 1934, at which time he resigned. While belonging to the old school of physicians, he had endeavored to keep abreast of scientific advancement by constantly studying throughout his professional life. Charitably inclined he gave unstintingly of his services to all who demanded them. He was widely beloved by the community he had faithfully served for four decades.

His hobbies were baseball and football and attendance on these sports provided his sole relaxation. For many years he was physician for the Beaumont baseball club, the Beaumont High School team and had assisted in taking care of the South Park High School team of Beaumont. He was a member of the staffs of Beaumont hospitals.

Dr. Gober is survived by his wife, formerly Miss Allie O'Brien of Temple, Texas, to whom he was married December 28, 1898. He is also survived by two sons, E. D. Gober and J. M. Gober, Jr., of Beaumont, and one daughter, Mrs. C. R. McCullough, Jr., of Kansas City.

Dr. David Porter Richardson of Henderson, Texas, died February 19, 1940, at his home in that city.

Dr. Richardson was born March 28, 1850, at Monticello, Louisiana, the son of Charles Bruce Richardson and Sarah Elizabeth (Bosworth) Richardson. His academic education was received in the public schools of his community and the Transylvania University at Lexington, Kentucky. He first studied engineering and in 1880 helped in the survey for the Texas and Pacific Railway Company from Weatherford to El Paso, Texas. Deciding upon medicine as a profession he entered Bellevue University Medical College, New York, from which he was graduated in 1886. After his graduation he located in Henderson, which was his home for the remainder of his professional life.



DR. D. P. RICHARDSON

Dr. Richardson was a member of the Rusk County Medical Society, State Medical Association, and American Medical Association for many years. Early in his medical career he served as a member of a district board of medical examiners. He was a greatly beloved physician in his community, which he had rendered long and faithful service as a family practitioner.

Dr. Richardson was married March 28, 1888 to Miss Ida Gray Nixon at Smithville, Texas. His wife

preceded him in death in 1923. He is survived by two sons, Charles B. Richardson, Lufkin, and David Porter Richardson, Jr., Dallas; and three daughters, Mrs. T. G. Masterson, Houston; Mrs. Sam Hanner, Palestine, and Miss Nannie Lou Richardson, Henderson.

Dr. Mary King Robbie of San Antonio, Texas, died March 6, 1940, at her home in that city from complications resulting from the bite of a black widow spider in October, 1939.

Dr. Robbie was born in Cynthiana, Kentucky, in 1879, the daughter of Patrick Henry and B. Cleary King. Her medical education was received in the old Fort Worth School of Medicine from which she was graduated in 1904. She had taken postgraduate work in the Chicago Polyclinic and the Illinois Postgraduate School of Medicine. She began the practice of medicine at San Antonio, which was her home for the remainder of her professional life.

DR. MARY KING ROBBIE

Dr. Robbie was for many years a member of the Bexar County Medical Society, State Medical Association, and American Medical Association. She had specialized in gynecology. She served as dean of the Santa Rosa Hospital from 1927 through 1929 and for many years was a member of the faculty of the nurses school in connection with the institution and a member of its staff. As surgeon for the San Antonio and Aransas Pass Railroad she was said to be the first woman railroad surgeon in the United States. She was connected for a number of years with the city health department of San Antonio and for ten years was a director of Our Lady of the Lake College and a lecturer on physical education at this school for fifteen years. In addition to her professional life she took an active part in local, state, and national politics. She attended the National Democratic convention in 1936, representing Mrs. Clara Driscoll of Corpus Christi, national committeewoman from Texas. In 1932 she was woman's campaign director and member of the executive committee for the 14th Congressional District and in 1937, as president of the Thomas Jefferson Club for women Democrats, she again represented Mrs. Clara Driscoll of Corpus Christi, then national Democratic committeewoman from Texas, at the regional conference of Women Democrats in Dallas. She was appointed by Governor Ross Sterling to represent Texas at the National Conference for Social Welfare at Minneapolis. Dr. Robbie was a member of the Catholic Church.

Dr. Robbie is survived by three sisters, Miss Josephine Henry King, San Antonio; Mrs. M. Connaughton, St. Mary, Ohio; and Miss Helen E. King, Philadelphia. Her husband, Dr. William Robbie, preceded her in death in 1927.

Dr. Frederick Terrell of San Antonio, Texas, died March 11, 1940, at his home in that city.

Dr. Terrell was born March 31, 1856, in La Fayette, Indiana, the son of General and Mrs. Charles Milton Terrell. He came to San Antonio, Texas, in 1867 after landing at Indianola. His academic education was received in the old German - English School in San Antonio, the buildings of which now house the San Antonio Junior College, and the De Pauw University, from which latter institution he was graduated with a Bachelor of Arts degree in 1876. His medical education was obtained in the Medical College of Harvard University, from which he was graduated with high honors in 1881. He began the practice of medicine in San Antonio, where he was, also, an acting assistant surgeon in the United States Army. He retired from active practice in 1900.

DR. FREDERICK TERRELL

Dr. Terrell was a member of the Bexar County Medical Society, State Medical Association and American Medical Association for many years, continuing his membership in these organizations after his retirement from practice. At the time of his death he was an honorary member of the Bexar County Medical Society.

Dr. Terrell gave abundantly of his time and talents to his community. He was elected mayor of the city of San Antonio in 1903, having been previously an alderman. He served as president of the San Antonio school board from 1909 to 1915. He was instrumental in the establishment of the Carnegie Library in San Antonio, which later became the San Antonio Public Library, and had served as a member of the Board of Trustees of this institution. During the World War he was chairman of the Bexar County Selective Service Board. He was one of the original members of the fire and police pension board, which he served as chairman from 1925 to 1939, when he resigned. He had served as president of the City National Bank and chairman of the board of directors of the City Central Bank & Trust Company. He was a director of the San Antonio Public Service Company and the Alamo Dressed Beef Company. He was a member of the San Antonio Lions Club, which he had served as its first president, and in which he held life membership at the time of his death. He was also a member of the San Antonio Country Club, Casino Club, and the Elks Club.

Dr. Terrell is survived by his daughter, Mrs. Albert Engelke of San Antonio. His wife, formerly Miss Marian Clement of Nashua, New Hampshire, to whom he was married shortly after his graduation in medicine, preceded him in death in 1924.

PRESTON HUNT, M. D.
TEXARKANA, TEXAS
Seventy-sixth President, State Medical Association of Texas.

Texas State Journal of Medicine

EDITORIAL OFFICES: 1404 W. El Paso Street, Fort Worth, Texas
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Vol. XXXVI **June, 1940** **No. 2**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

Dr. Preston Hunt, Seventy-sixth President of the State Medical Association of Texas, was born on a farm in Lee County, Mississippi, February 5, 1866, his parents also being the descendants of farm people, highly respected leaders in their community. His maternal grandfather was a Captain in the Confederate Army during the War between the States. His paternal grandfather was a Judge on the bench of a Civil Court in Mississippi.

Education came to Dr. Hunt the hard way. His early schooling prior to the study of medicine, was in the county schools of those early days, including the equivalent of our present-day high schools. At the age of twenty-one, he left home in pursuit of a career and an independent livelihood. He first became a laborer in the construction of a railroad, thus financing his way through high school. Graduating from high school in a small town in Mississippi, he removed to Texarkana, in September, 1899, where he entered the railway news business, becoming the Superintendent of that department of the railway after two years of service. Having again accumulated a reserve of money, he resigned and entered the Hospital College of Physicians and Surgeons, Louisville, Kentucky, completing the first year of medicine in that institution. He then entered the Medical Department of the University of the South, at Sewanee, Tennessee, where he completed his second year in the study of medicine. A third year, and the degree of M. D., were taken at the College of Physicians and Surgeons, now Emory University, Atlanta, Georgia. He was graduated in 1901.

Following graduation, Dr. Hunt returned immediately to Texarkana, where he began the practice of medicine, April 16, 1901, and where he has practiced medicine continuously since that time. Directly after taking up the practice of medicine, he became associated with the Texarkana Hospital, eventually buying an interest in the hospital, and becoming a director and treasurer thereof, a connection which he has enjoyed throughout all of the years of his practice. In 1931, he formed a partnership with Dr. William Hibbitts, a connection which has continued since that time.

Dr. Hunt is a member of the American College of Surgeons, having been made a Fellow of that organization in 1923. He is a member of the Baptist Church, which institution he has served as a member of the board of deacons for the past forty years. He is a Knight Templar and thirty-second degree Royal Arch Mason.

Dr. Hunt rendered valuable non-military service during the World War. He was an examiner of recruits, and a member of the Medical Section of the Council on National Defense. He was Supervisor in the Fifteenth Councilor District, of registration and selection of physicians for military service. In this work he had occasion to make numerous trips over the State, and even to Washington, D. C., all without remuneration, other than the satisfaction of a duty performed.

Dr. Hunt was married to Miss Hattie Hutton of Ballinger, on January 1, 1914. There

have been no children. Mrs. Hunt died January 27, 1935.

Dr. Hunt has rendered signal service to his community as a public spirited citizen. He has served both as city health officer and president of his city board of health. He is a member and past president of the Texarkana Lions Club. In 1936, Dr. Hunt purchased and donated to the Tex-Ark Council of the Boy Scouts of America a 240-acre tract near Texarkana. For this property he bought materials for more than five miles of fencing, made an assembly ground, and provided a ninety-foot flag pole in a section enclosed by a wall of native stone approximately 300 feet in diameter, in honor of his deceased wife. Many other fine improvements on this property given by Dr. Hunt bear witness to his beneficence.

The election of Dr. Hunt to the high office of President of the Association brings to an apex (we hope not to a conclusion), a service to organized medicine of many years duration, in which service he has occupied numerous important positions, always with devotion and success. He was at one time Secretary of the Bowie (Texas) and Miller (Arkansas) County Medical Societies. He likewise served as President of each Society, at a time when dual membership in adjoining states was permissible. The Societies, which it should be said in explanation, were separate entities in those days, working together as a unit. Dr. Hunt also served as President of his District Medical Society. He was first Vice-Councilor for a number of years, and then for eight years Councilor of the Fifteenth District, and served six years as a Delegate from his county medical society.

Dr. Hunt, upon taking over authority at the Dallas annual session, set out in full a fine lot of objectives for his administration. His statement will be found in the Transactions, printed in this number of the JOURNAL. They should be read in this connection. We are sure, and it almost goes without the saying, that the official family and the rank and file of the Association, will rally to the support of Dr. Hunt in his efforts for the good of the medical profession and its dependent public. He has asked most earnestly for such support.

The Dallas Annual Session was, to use the language of the moving picture producers, colossal. It was big in detail and in perspective. It was just such a meeting as it takes to make a true temple of the art and science of medicine. We doubt very much whether any who attended the meeting failed to profit therefrom, and so far as we can learn there were no dissatisfied customers. The Dallas County Medical Society, its Woman's Auxiliary, and the Committee on Arrangements, builded better, doubtless, than they expected.

The first big item worthy of mention was the attendance, the largest in the history of the Association. The total registration was 2,558. This figure may be broken down as follows: Members, 1,562; guests, 18; visitors (physicians), 46; interns, 20; junior and senior medical students, 172; exhibitors, 154; women, 644. A notable fact involved in these figures, is that almost exactly three-eighths (that is not so far from one-half) of the membership of the Association attended its annual session. That may not be a national record, but it is good for a state as large and as varied in its population and conditions as Texas. As a matter of comparison, the total attendance at the previous annual session, was 1,982, which total was the third largest in the history of the Association. The largest total registration up to this year, was at Galveston, two years ago, when 2,010 were registered. The Dallas meeting in 1935, had a total registration of 1,989. It will be borne in mind that total registration includes the several elements shown in the above breakdown. As for actual members, 1,250 registered at San Antonio last year. The previous largest registration of members was in Dallas, in 1935, when 1,326 registered. The membership registration at Galveston year before last was 1,185.

A significant feature of the annual session this year was the attendance on the section meetings, general meetings, clinical luncheons and combined section meetings. We have heretofore complained that attendance on our scientific meetings has not been what it should have been, particularly on the last day of the meeting. As a matter of fact, when the last general meeting of this year adjourned, there were exactly twenty-three in the audience, but when the last scientific paper was presented, a few minutes before, there were better than 200 present. It seems that the brethren do not seem to care much for ceremonies any more. But the President and the President-Elect, and the twenty-three who remained to see the passing of authority, apparently enjoyed the occasion.

Nor should we fail to say in this connection, that probably at no annual session has there been a more attractive and satisfying scientific program. The sections presented any number of fine papers, to the value of which our distinguished guests added considerably by their discussions. Our distinguished guests were, without exception, we believe, entirely worth while, not alone from the angle of their knowledge of medicine, but in their ability to impart the same

satisfactorily and attractively to their audiences. That makes a fine combination, and perhaps is the principal reason why the attendance on all of the meetings was so good.

The Memorial Services were likewise well attended, which was very pleasing to many of us who have heretofore felt chagrined that the attendance on this very fine function was not so good. The program for the Memorial Services was beautiful and appealing.

As before, the last meeting of the session was a combined sections meeting, with short, snappy papers by our distinguished guests. It immediately followed the clinical luncheon, in effect making one event of the two. Also as before, the last General Meeting of the session was held during the morning hours. Perhaps we have thus developed the right combination for holding our members until adjournment.

Our Past Presidents were presented during the Opening Exercises, by one of their own numbers, Dr. C. M. Rosser of Dallas, who, as is his custom, precipitated a very attractive innovation. The event was most pleasing, and it consumed very little time.

Our scientific exhibits were very fine. There was a fair attendance, but nothing like there should have been. The difficulty in this connection was the necessity of locating the scientific exhibits rather remotely as relates to the centers of activity. Awards for the best two scientific exhibits were this year made to Dr. J. M. Hill and associate, of Dallas, for their work on concentrated plasma, and to Drs. Bedford Shelmire and J. G. Brau, and associate, for the demonstration of contact dermatitis from weeds. The committee gave honorable mention to an exhibit by Dr. Dudley Jackson and associates, on their comparative study of human and animal neoplastic disease, and to Drs. Duncan, Seybold, Hotchkiss and Kahler of the Anatomical Laboratory, Medical Branch of the University of Texas, Galveston, for their dissections of normal and abnormal spines, to illustrate sites of compression and distortion of associated nervous structures.

Our technical exhibits were up to the usual standard in quality and fitness, and somewhat beyond the usual number. Every available booth was taken. There were an unusual number of attendants for these booths, and it is our feeling, and certainly hope, that not only were our exhibitors satisfied but our members well served.

The entertainment features of the session were, as would be expected, rather exceptional. Certainly the entertainment was spontaneous and replete with good will, to say nothing about its attractiveness. The extra feature of the entertainment program was the party at a night spot in the edge of town. There were several rather unusual and pleasing vaudeville acts, and much dancing and no end of good fellowship.

The usual meetings of independent but related organizations were held on Monday prior to the opening of the session proper. These meetings appear to have all been well attended, and their programs satisfactory to those for whom they were prepared.

The following officers were elected for the ensuing year: President-Elect, Dr. N. D. Buie, Marlin; Vice-Presidents, Drs. G. A. Schenewerk, Dallas; James J. Gorman, El Paso, and S. J. R. Murchison, Fort Worth; Secretary, Dr. Holman Taylor, Fort Worth (reëlected); Treasurer, Dr. K. H. Beall, Fort Worth (reëlected); Trustee, Dr. W. R. Thompson, Fort Worth (reëlected); Councilors, Drs. E. A. Rowley, Amarillo (reelected); C. E. Scull, San Antonio (reelected); J. G. Webb, Mercedes (reëlected); H. F. Connally, Waco (reëlected); C. A. Smith, Texarkana (reëlected); Delegates to American Medical Association, Drs. H. R. Dudgeon, Waco (reëlected); A. A. Ross, Lockhart (reëlected); E. H. Cary, Dallas (reëlected); Alternate Delegates, Drs. E. W. Bertner, Houston (reëlected); H. Leslie Moore, Dallas (reëlected), and J. J. Crume, Amarillo.

The next annual session will be held in Fort Worth, May 12, 13, 14 and 15, 1941, which date has very recently been selected by the Executive Council, to which group the matter was referred by the House of Delegates at Dallas.

The House of Delegates at **Dallas** dealt with many important problems, apparently with satisfaction to all concerned, and certainly with a minimum of lost motion. True, there were two very definite periods of deliberation when much more was said than need be, but such occurrences are inevitable in a deliberative body. We have seen Congress do that. However, for the most part, the work of our several committees had been covered by well considered reports, and these reports had gone to each member of the House of Delegates in advance of its first meeting. Thus time was saved in presenting reports, there being no necessity of reading certain of them, and thus time was saved by the Reference Committees in giving them consideration. Those who were to sit on the Reference Committees knew in advance that they were to do so; hence, it is presumed, were ready to pass judgment on the reports to come before them. The House sat throughout Monday, including the evening hours, and again Wednesday evening for a couple

of hours, and on Thursday morning for more time than should have been used in that way at that time. However, some of the reference committees were able to report as early as the Monday evening session, and the balance of them, with two or three exceptions, finished their work with the Wednesday evening session.

It is always a matter of interest to consider the personnel of the House of Delegates, in view of its division into ex-officio members, and county society elected members. The total membership was 138. Of these, 106 had been elected by county medical societies, and thirty-two served ex-officio. In the light of democratic principles, this would appear to be a very effective and proper combination. Thus there were a sufficient number of experienced members to start with, all elected to their positions by the House of Delegates itself, and enough new blood to keep the organization out of avoidable ruts.

Perhaps the outstanding fact in connection with the meeting, was the announcement that for the first time the State Medical Association was completely organized, each county in the State at the time being a part of some medical society. It will be recalled that President Dr. Reeves announced at the beginning of his administration that his primary objective would be to complete the organization of the Association. Needless to say, Dr. Reeves is ready and willing to share this distinction with the Board of Councilors, and numerous interested members outside of the official group. It is, as he said, a fact that no organization such as ours can be complete or effective except its responsible officers and a majority of the membership appreciate their responsibilities and become active.

Again there is a distinction due the administration just closed. Membership attained its highest point during the year. The total membership for the year 1939, was 4,348. The previous high was 4,201. The increase was, therefore, 147.

The problem of Honorary Membership seems to be disturbing the Board of Councilors no little. There were during the past year seventy-nine Honorary Members, net, and three Members Emeritus. This number will be increased right away by the addition of fourteen at the Dallas meeting. So important does the Board of Councilors consider the situation that it has proposed amendments to the Constitution and By-Laws, requiring county medical societies to pay $4.00 for each Honorary Member elected upon their nomination. This fee would cover subscription to the JOURNAL, and cost of medical defense. The amendments will be voted upon at the next annual session.

Another membership problem was that of Intern Members. It will be recalled that our By-Laws were amended recently so as to extend to physicians who are completing their medical education by serving internships, but who have been regularly qualified for the practice of medicine in Texas, full membership upon the payment of dues of $4.00. This figure was established because of the cost of subscription to the JOURNAL and medical defense. The question was raised as to whether the period of intern membership should not be made to embrace the latter part of one year, and the beginning of the next, to coincide with the usual intern year. There is merit in the contention that this should be done, but there was entirely too much complication in the matter of accounting, not to mention the already existing confusion because of differences between the membership year and the fiscal year. Under the circumstances, the Editor agreed to send the JOURNAL free of charge to all interns who become intern members for any part of the year not actually covered by membership dues.

Much might be said at this time concerning the financial affairs of the Association as developed in the report of the Board of Trustees, but it should be sufficient to simply refer our members to that report. It is not a very difficult matter to understand an auditor's report once an idea is gained of the system followed in compiling the same. There is not any way other than that usually resorted to by auditors in making their reports, whereby such matters can, in fact, be understood. Last year the Board of Trustees reported a reserve and surplus of $107,-851.12. They reported a loss of $720.66 for the year. That was very largely, however, a paper loss, as was explained at the time. This year, a reserve and surplus of $109,-755.59 was reported. That gives us a profit instead of a loss. The actual figures covering profit and loss, however, are derived from balancing receipts against expenditures. Income from all sources last year was $58,-857.91, whereas the total cost of operation was $57,296.63. There was, therefore, a profit of $1,561.28. As before, there is a certain amount of paper profit and loss. The significant point is that we operated within our income, and saved a small sum for the next year. However, and this is an important point, had the Trustees been forced to pay from current income the cost of litigation involved in protecting the citizenship feature of the Medical Practice Act, there would have been, instead of a gain, a loss of a little

more than now shown as a gain. The litigation cost $2,772.69. The reason this expenditure does not show in calculating profit and loss for the year, is that the payment was made from the reserve and surplus. Thus is demonstrated the value of such surplus, or, as it has been more properly called, "working capital." An unexpected and emergency expense such as this cannot very well be added to the normal operating expense of any organization such as the State Medical Association.

And in this connection, the Trustees very wisely held that it would be futile for us to go to the trouble and expense necessary to secure helpful laws for the protection of the public health and then not support them when they are attacked in the courts.

The Trustees presented a very illuminating report of the cost of our annual sessions, including, for the past several years, the payment of expenses of Honor Guests. At one time the latter was a highly debatable subject. It seems now that all are agreed that it is wise to pay at least the expenses of those distinguished members of the profession who thus serve us so well during our meetings.

It is also well to note that the Trustees think well of the idea of paying the expenses of our Councilors, in the prosecution of their work within their respective districts. The House of Delegates agreed with the Trustees in the matter. We are confident that if the money becomes available for the purpose, it will be agreeable all around, and indeed definitely to the advantage of our work, to pay the expenses of other important agents of the Association. Speed the day.

An outstanding development during the meeting was in connection with our Library. At another time a more extended account of these developments will be given in these columns. For the moment suffice it to say that President Reeves appointed a special committee of the Association, the duty of which was to seek endowments for the Library. This committee did not report, as it had not had an opportunity to become active. In the meantime, the Board of Trustees, appreciating the importance of the matter, brought about an organization, upon the advice of our attorneys, the purpose of which is to receive and administer endowments for the Library of the State Medical Association, appropriating to the support of the Library the income from any endowments thus received. The new organization is known as the Texas Memorial Medical Library Association, and its total membership comprises the five Trustees of the State Medical Association of Texas. Organized thus, the Library is in a position to assure any prospective donor that any money thus donated will be spent exactly as desired by the donor, and that such donations may be charged against income tax returns. These are two important matters in connection with the endowment of our Library, the answer to which this organization is expected to be. Already three endowments have been set up, one by Dr. E. W. Bertner of Houston, another by Dr. Sam E. Thompson of Kerrville, and the third by the Texas Pediatric Society. Our editorial hat is off to these contributors to a vital phase of our work, and particularly to the pediatricians, who may easily have assumed that the Library is no more their special responsibility than it is the responsibility of other groups within the organization.

It would be well if those who are interested in the library service of the State Medical Association, would read that portion of the Report of the Board of Trustees devoted to the operation of the Library. The great work it is doing, and is capable of doing, is clearly evident from this report.

The problem of re-education of the medical profession certainly shared the spotlight this year. The Board of Councilors reported that quite a number of refresher courses on maternal and child health had been conducted throughout the year, and that this practice would be continued. In this service the Board of Councilors is working in close coöperation with the State Health Department; indeed, the State Health Department is paying most of the expenses of the courses.

The Committee on Postgraduate Medical Education reported that, through another coöperative activity with the State Health Department, a course of instruction in maternal and child health of three weeks duration, in each of our two Medical Colleges, had been arranged for. Through the use of federal funds, the State Health Officer was able to defray the expenses of these courses, including a scholarship fee sufficiently large to pay the expenses of attendance. Twenty scholarships were established for each school. There was no dearth of application for these scholarships, and it is understood that the courses are proving most satisfactory.

Through the suggestion of President Dr. Reeves, and upon the approval of our Executive Council, a so-called Council was set up, the purpose of which is to coördinate all of the agencies of the State Medical Association engaged in the constant effort to keep the medical profession abreast of the advance of scientific medicine, and to extend through a coördinating agency the help the State Health Department needs in carrying on certain important features of its work.

The new group will be known as the Council on Postgraduate Medical Education. It will comprise a permanent membership of five, serving on a five-year, overlapping term-of-office basis, and an ex-officio membership of the following committees: Cancer, Mental Health, Fractures, Maternal and Child Health, Tuberculosis, Venereal Diseases, Industrial Health, Malaria, and Pneumonia Control.

The Committee on Tuberculosis, incidentally, has recommended that the State Sanatorium near San Angelo, provide a course of postgraduate instruction for physicians from over the State, in artificial pneumothorax. The State Health Department is very much interested in the matter, and doubtless something will be done about it.

Incidentally, the Committee on Tuberculosis recommended the erection of a sanatorium for the care of Latin-Americans, preferably somewhere in Southwest Texas, where the greatest incidence of the disease occurs in these people. The recommendation was approved, and referred to our Legislative Committee.

The perennial subject of contraception also received attention, and perhaps for the first time a definite step was taken in the direction of a solution of the problem. However, no matter what is done about it, there will remain a difference of opinion as to whether it should have been done, and what shall be done further. Resolutions were adopted at the Dallas meeting, intended to get the subject of contraception out of the shadows, and put it in the light along with the other problems of medicine. By the adoption of the resolution, the State Medical Association has said that it considers scientifically correct methods of prevention of conception, and the actual practice of prevention, a suitable subject for teaching and study in Medical Colleges and in recognized, professionally controlled women's clinics. It will be interesting to note what the American Medical Association does about the matter, at its immediately forthcoming New York meeting.

Our efforts to effectively establish liaison with the reputable Negro physicians of the State appear to be attaining no little success. The report of the committee having the matter in charge, should be read by each white physician in the State. Suffice it to say here, that representatives of the State Medical Association will address a meeting of the National organization of Negro physicians, at Houston, this summer; that at the instance of the Negro organization in Texas, our Committee on Tuberculosis will make an inspection of the Tuberculosis Sanatorium for Negroes at Kerrville, in view of criticisms of that institution made by a similar committee from the Negro organization, and that continued efforts will be made by the Legislative Committee of our Association to secure a State Hospital for the treatment of Negro epileptics, preferably in connection with such a Hospital for white patients, at Abilene. It is our candid opinion that the efforts of the State Medical Association of Texas, and the Lone Star State Medical, Dental and Pharmaceutical Association to thus work together, in the light of heretofore intervening social implications, will come nearer solving the problem of Negro membership in county medical societies over the State, for a time anyway, than any other procedure that could be followed. The idea is earnestly recommended to other Southern states.

The House of Delegates joined the Southern Medical Association, the Mississippi State Medical Association, and perhaps other state organizations, in requesting Paramount Pictures to desist from its announced intention of giving Dr. W. T. G. Morton, a Boston dentist, credit for the discovery of anesthesia, in a picture now being made, for the reason that to do so would be to extend honor where honor is not due, in view of the fact, according to these organizations, the Post Office Department, and other high authorities, that the honor, instead, belongs to Dr. Crawford W. Long of Georgia. Whether Paramount will do anything about it, is not known, in spite of our efforts to reach the studio by telegraphic communication.

The distribution of medical service received the attention it was due to receive. The Executive Council recommended that the problem be relegated to our Council on Medical Economics. At the same time the Council on Medical Economics recommended that a special committee be appointed to develop the anticipated plan. The House of Delegates directed the Council on Medical Economics to do the job, and also directed that the Legislative Committee attempt to secure the enactment of any necessary State legislation in connection therewith. It is hoped by those who have been studying the plans being developed throughout the country whereby medical service may be secured through a coöperative insurance set-up, more or less along the lines of the Group Hospital Service plan now so successfully operated in Texas, that some such plan for medical service may be devised for Texas which will be suitable to conditions existing in Texas. It will be understood that any such plan to be satisfactory, must insure against the intervention of any agency whatever between the patient and his physician, and continuously insure the free

choice of physician by the patient. Whatever plan is set up, must receive the approval of at least the Executive Council, and the House of Delegates if possible, before being placed in operation.

Through the advice of the Committee on Mental Health, the demand for a Psychopathic Hospital at Dallas, as provided in the State law which resulted in the erection of such an institution at Galveston, was reiterated. A State Department of Mental Health was also called for, and again the very unsatisfactory law covering the commitment of the mentally ill to State Hospitals was severely criticized. It was advised that if there is a constitutional inhibition, either a law which will be constitutional be written, or the Constitution changed. It was rightly held that the present practice of committing the mentally ill to State Hospitals is barbarous, and quite in contravention of humane principles.

The Council on Medical Economics requested the Trustees to set up a statistical service in the Association, if and when funds will permit, looking to the accumulation of facts and figures connected with the finances of the practice of medicine, directly and indirectly, for the use of those agencies concerned with such matters. The Committee on Industrial Health made practically the same suggestion, but directly in connection with industrial work throughout the State. The latter committee made a very pertinent observation. It seems that our large manufacturing and commercial concerns have been permitting their first-aid agencies to assume permanently the treatment of cases coming to their attention by virtue of the fact that they were of an emergency nature, thus often denying these patients very necessary medical attention.

Our new Committee on Pneumonia Control set up a very fine procedure in the prevention and treatment of pneumonia, both from the curative and the public health standpoint. Our Committee on Venereal Diseases extended its plans and policies considerably, as did some of the other such organizations. All of the suggestions concerned were approved.

The Section on Medicine and Pediatrics was divided into two new sections, one on Medicine, and the other on Pediatrics. It was decided that the Section on Medicine should continue to have two invited guests at each annual session, and the Section on Pediatrics should be allowed one such guest. The change was recommended by our retiring President, and our Council on Scientific Work. It had been asked for by our very fine Texas Pediatric Society.

According to a change in the By-Laws, annual reports will hereafter be rendered twenty days in advance of the annual session, instead of ten days as heretofore provided. Thus the Central Office should be able to supply annual reports to each member of the House of Delegates well in advance of the annual session.

Our General Attorney was requested to determine whether furnishing mechanical aids to the hard of hearing is in contravention of our Medical Practice Act, and in the instance it is not, our Legislative Committee has been instructed to do something about it.

Our Legislative Committee was directed to make every effort to secure better appropriations for our State Health Department.

The policy of coöperating only with those lay organizations which recognize the true status of the medical profession in connection with the practice of medicine and the public health, was reiterated and emphasized. In accordance with this policy, physicians will be slow to coöperate with organizations which have not recognized that the views of the medical profession are paramount within the field of its activities.

Again we urge our readers to study the "Transactions," as published in this number of the JOURNAL.

The Technical Exhibits at Dallas were fine. They received attention accordingly. There were more booths than usually is the case, we believe, and certainly more attendants. We noticed a very interesting situation in this connection. It was not at all uncommon to hear an exhibitor greet several physicians in succession, by name, as they passed by, or paused for business or personal conversation. This state of affairs results from the fact that many of our exhibitors are represented year after year, and to a large extent by the same group of attendants. We like it that way. We look upon our technical exhibitors as part and parcel of our organization. The following exhibits were presented:

BOOKS

J. B. Lippincott Company, Philadelphia. Represented by John L. Rosecrants.

C. V. Mosby Company, St. Louis, Mo. Represented by Mrs. S. G. Cooke.

W. B. Saunders Company, Philadelphia—*J. A. Majors Co.*, New Orleans and Dallas.. Represented by Dr. J. A. Majors, L. B. Shaver, E. O. Jackson, N. R. Shubert, and C. R. Syler.

COSMETICS AND TOILET PREPARATIONS

Luzier's Inc., Kansas City, Mo. Represented by Miss Virginia L. Rice and Mrs. Ernestine Phillips.

The Mennen Company, Newark, N. J. Represented by H. C. Richards.

DIETETIC SUPPLIES

Libby, McNeill & Libby, Chicago. Represented by C. C. Lippman.

M. & R. Dietetic Laboratory, Inc., Columbus, Ohio. Represented by E. J. and H. L. Bryant.

Mead Johnson & Co., Evansville, Ind. Represented by J. B. Rivers, John J. Schaup, and Edward W. Brady.

Paley-Sachs Food Company, Houston. Represented by S. I. Paley and J. Sachs.

Pet Milk Sales Corporation, St. Louis, Mo. Represented by Carl F. Cohen, R. E. Brady, L. R. Patterson, and C. Rinderer.

S. M. A. Corporation, Chicago. Represented by J. T. Childers and R. G. Holleman.

EDUCATIONAL

The Pearson School for Exceptional Children, Muskogee, Okla. Represented by Stella R. Pearson.

INSTRUMENTS, APPARATUS AND SUPPLIES

The A. S. Aloe Co., St. Louis, Mo. Represented by Guy E. and Opal Whale.

Cameron Surgical Specialty Co., Chicago. Represented by O. H. Jones.

A. P. Cary Company, Dallas and Houston. Represented by W. N. James, R. C. Lawson, H. S. Longnecker, and K. K. Hettinger.

J. E. Hanger, Inc., Dallas, Mrs. W. E. Findley, Millie Dial, Harold Craig, and W. E. Findley.

Earl C. Parker Company, Houston. Represented by H. R. Kelly.

Holland-Rantos Co., Inc., New York. Represented by William Allen and E. L. Primm.

E. H. McClure Company, Dallas. Represented by E. H. McClure, J. C. Rutledge, and Miss B. E. Lacy.

Medcalf & Thomas, Fort Worth. Represented by E. G. Ashe, K. A. Thomas, Snider Jacobs, Bart Johnston, Jack Price, and Eugene Lemmon.

V. Mueller & Co., Chicago. Represented by Ford Dixon.

Terrell Supply Company, Fort Worth. Represented by O. Coffman, T. S. Curtis, T. H. Gothard, and Elbut Reese.

INSURANCE

International Travelers Assurance Co., Dallas. Represented by Mrs. Hilton Campbell.

Medical Protective Company, Wheaton, Ill. Represented by Mr. and Mrs. H. L. Wiggs.

MISCELLANEOUS

The Baby Development Clinic, Chicago, Ill. Represented by Wilma B. Wood.

Dallas Coca-Cola Company. Represented by Bud Nurre, A. R. Jones, and E. T. Meek.

Dr. Pepper Co. (Circle A Ginger Ale), Dallas. Represented by Paul Gandy.

Philip Morris & Company, Ltd., New York. Represented by Harry S. Keelam, Mrs. Harvey Phillips, R. E. Sturgeon, and G. M. Shanks.

OPTICAL EQUIPMENT

American Optical Company, Southbridge, Mass. Represented by D. G. Anderson, C. C. Marlow, Ed Sandkuhl, and S. T. Grunnah.

Riggs Optical Company, Chicago. Represented by Julius Sylvester, W. S. Palmer, and R. Boerger.

PHARMACEUTICALS AND BIOLOGICALS

Arlington Chemical Company, Yonkers, N. Y. Represented by Mrs. A. B. Greaber and Miss Lorraine Kennedy.

Burroughs, Wellcome & Co., Inc., New York, N. Y. Represented by H. F. Emerson, R. E. Sharpe, and A. B. Hosey.

Cutter Laboratories, Berkeley, California. Represented by L. Meredith, Donald H. Wonder, and W. A. Krauss.

Davies, Rose & Company, Ltd., Boston, Mass. Represented by Gordon L. Cunningham.

Eli Lilly & Co., Indianapolis, Ind., Represented by W. E. Butler, G. A. Raven, M. A. Brin, H. M. Ricketts, and J. B. Bradley.

Gilliland Laboratories, Inc., Marietta, Pa. Represented by T. A. B. Cornman.

Hynson, Westcott & Dunning, Inc., Chicago, Ill. Represented by Lewis M. King, and Stewart Livingston.

Lederle Laboratories, Inc., New York, N. Y. Represented by J. L. Storey, Bob Merrell, Maxwell James, H. S. Austin, and R. V. Slaughter.

Merck & Company, Inc., Rahway, N. J. Represented by Mrs. N. M. Gaffney, N. M. Gaffney, Jack Grimes, and Ed Scown.

Petrolagar Laboratories, Inc., Chicago, Ill. Represented by T. P. Maguire and M. D. Herrick.

Scientific Sugars Co., Columbus, Indiana. Represented by E. E. Weaver, H. S. Kinney, and W. H. Jones.

Sharp & Dohme, Philadelphia, Pa. Represented by Chas. B. Pyles, Lee E. Wisdom, C. B. Allison, J. G. K. Burnett, and E. W. Metzger.

Smith, Kline & French Laboratories, Philadelphia, Pa. Represented by Mr. and Mrs. H. O. Walton.

U. S. Standard Products Co., Chicago. Represented by J. F. Sams, J. T. Kenney, and L. K. Miracle.

Winthrop Chemical Company, Inc., New York. Represented by M. T. Bowman, V. M. Payne, Jr., Sidney Mills, and Wm. D. Riley.

John Wyeth & Brother, Inc., Philadelphia, Pa. Represented by W. C. Autrey, W. F. Perkins, W. C. Conner, and E. A. Huffman.

X-RAY AND PHYSIOTHERAPY EQUIPMENT

H. G. Fischer & Co., Chicago, Ill. Represented by H. A. Glover, O. N. Riggs, J. P. McFarland, and Ben Wulze.

General Electric X-Ray Corporation, Chicago. Represented by W. F. Hynes, C. D. Burgy, T. L. Uhr, and R. A. Snyder.

The Gilbert X-Ray Company of Texas, Dallas. Represented by H. E. Bloss, M. K. Gilbert, E. L. Black, and H. V. Campbell.

Johnson X-Ray & Electro Therapy Co., Dallas. Represented by Mr. and Mrs. Frederic Johnson, Harold Ingham, Ted Elliott, John J. Gould, and Alma Averyt.

R. P. Kincheloe Co., Dallas. Represented by R. P. Kincheloe, J. B. Rawls, Jr., A. W. Oakley, Reid Hasgall, and O. B. Schaefer.

W. A. Kyle Co., Houston. Represented by W. A. Kyle, Dabney Carr, and Robert H. Beals.

Liebel-Flarsheim Co., Cincinnati, Ohio. Represented by R. R. Koonts.

McIntosh Electrical Corporation, Chicago. Represented by James A. Lee and D. J. Baker.

Southwest X-Ray Sales Co., Dallas. Represented by Tom Dawson and Dewitt T. Furr.

Westinghouse X-Ray Company, Inc., Dallas and Long Island City, N. Y. Represented by Dan Fields, H. W. Clark, Wm. Baker, and Robt. Menefee.

The Texas Social Hygiene Association was organized for the worthy and ultimately necessary purpose of wiping the venereal diseases off the public health slate. In view of the desirability of such activity, and in the hope that thus we would be able to do for venereal diseases what has been done in the case of tuberculosis, for instance, by the proper coördination of medical and lay efforts, a number of leaders in the medical field joined a number of lay leaders in welfare work, in promoting the organization, and establishing its policies. A general direc-

tor, Mr. R. F. Voyer, was employed, and what was believed to be an effective and protective set of by-laws was adopted. The organization was incorporated.

A prime purpose of the organization was to coördinate lay and professional efforts to eradicate venereal diseases. The organizers, both medical and lay, agreed in the beginning that there should be a predominance of medical men on the board of directors, and by-laws so providing were adopted. In the opinion of the physicians who coöperated in promoting the association, that provision was and is necessary to safeguard the undertaking against danger arising from beliefs, policies, and practices which medical men have learned by study and experience to be unwise and dangerous. With this thought in mind, arrangements were made early for close coöperation between the Social Hygiene Association and the State Board of Health and the State Medical Association of Texas, with leadership virtually placed in the State Board of Health. For a time the plan worked admirably.

Eventually, however, there came a time when the general director of the organization differed with the State Board of Health and with those medical members on his own Board of Directors who had occasion to act in the matter, as to both policy and procedure. It happened that these differences were essentially medical, and that legislative policy in connection with the public health was seriously involved. Much to the surprise of most of the medical personnel of the Board of Directors of the organization, not to say to their consternation, a line was very definitely drawn at Austin, as between the Texas Social Hygiene Association on the one side, and the State Board of Health and the State Medical Association of Texas on the other. There was much confusion as a result of this unfortunate state of affairs, and a consequent failure to procure the enactment of some very important health legislation.

The story is entirely too long for detailed discussion here. Suffice it to say that the medical personnel of the directors of the Hygiene Association decided to withdraw from any connection therewith. To accomplish that purpose and to give proper notice of their withdrawal, they wrote and signed the written withdrawal published herewith, and for the sake of emphasis, boxed in. The By-Laws of the Hygiene Association provide that the annual membership meeting shall be held at the time and place of the annual session of the State Medical Association. The day and hour for holding the meeting was fixed at the Dallas annual session this year and due notice given. The withdrawal quoted herewith was delivered to the Secretary before the announced time for holding the meeting. When it was delivered to Mr. Voyer, the Secretary and General Director, the representative of the withdrawing members was informed that the meeting had been held an hour earlier, and a new Board of Directors, not including the physicians so withdrawing, had been set up. No notice of the change in the time of meeting had been given. The notice of the intention to withdraw from the association was handed to the secretary with no knowledge of the change. It appears, nevertheless, that it was held that the withdrawing group were acting somewhat beside the point.

This editorial reference to an unfortunate situation is made in order that the medical profession and as many others as possible may have this information.

The eradication of preventable diseases is one of the most cherished ambitions of the medical profeession. In public health activities, as in the field of curative medicine, the consensus of opinion of the medical profession with regard to such matters should be accepted and all efforts toward prevention and cure directed accordingly.

Dallas, Texas, May 15, 1940.

To Texas Social Hygiene Association, Its Members, Officers, Executive Committee and Board of Directors:

We, the undersigned, former Directors of this Association, whose terms of office have now expired, respectfully give notice of our withdrawal as members of the Association, and our decision to serve no further as officer or Director thereof. (Signed.)

T. Wade Hedrick	Thos. M. Dorbandt
W. B. Russ	Geo. W. Cox
M. W. Sherwood	Calvin R. Hannah
F. P. Miller	E. A. Rowley
Holman Taylor	E. W. Bertner
Judson L. Taylor	E. H. Cary

Statement

Various members and directors of the Texas Social Hygiene Association have determined that the purposes for which this organization was formed can be better effected through concentrating their energies behind the State Department of Health and the State Medical Association of Texas, both of which are well equipped to further such objectives. For these reasons, such members and directors have severed all connection with the Texas Social Hygiene Association.

In promoting the Texas Social Hygiene Association, the coöperating physicians believe the purpose and policies originally formulated and approved by the medical members would be helpful in the eradication of this class of preventable diseases. The medical men heretofore coöperating now believe that the present activities of the Association will retard instead of advance the intended purpose.

It is believed that better headway in the eradication of venereal diseases can be made henceforth by the continued combination of forces of the State Health Department and the State Medical Association. There is a bureau in the State Health Department for this sole and exclusive purpose, and there is a committee in the State Medical Association, the purposes of which are exactly along these lines and the policy of which is to work in close harmony with the Bureau of Venereal Diseases of the State Health Department.

THE PHILOSOPHY OF MEDICINE*

L. H. REEVES, M. D.
FORT WORTH, TEXAS

Philosophies are divided into two classes —cosmic and personal. The former refers to speculative discussions of the nature of the universe. Personal philosophy may be referred to as the philosophy of life. It is essentially practical, and it serves as a guide which influences or determines one's actions and conduct.

The physician, the patient, and the public view the practice of medicine from different angles, their philosophy never being the same. In this discussion I shall consider only the philosophy of the physician.

A physician's philosophy, in addition to its practical implications, includes such an understanding of the phenomena and affairs of his every day experience that it forms a basis and a direction for his life's work.

Medicine itself is concerned with the phenomena of life. We find many philosophies, not necessarily conflicting but colored by the various experiences upon which they are founded. It is claimed that seamen are inclined toward fatalism; statesmen believe that majorities cannot be wrong; politicians believe that any "dark horse" might win; the American colonists pinned their faith on liberty; teachers are sure that education is the hope of the world; the jockey thinks there is nothing comparable to a fast horse; the shoemakers think there is nothing like leather; Aristotle taught that the mean between extremes was universally the best; Plato maintained a philosophy of idealism, and similarly a physician's philosophy is shaped and molded by the experiences and traditions upon which it is founded.

*President's Address, delivered at the Opening Exercises of the State Medical Association of Texas, Dallas, May 14, 1940.

MEDICAL HISTORY

The history and study of the development of medicine is most interesting and instructive. It is almost as old as time. Down through the ages, physicians have attempted organized medicine. It is mentioned in Holy writ — the Old Testament — in Leviticus, Numbers, Exodus, Joshua, Isaiah, Kings and Deuteronomy.

In earlier times, man fought with his individual enemies—animals, elements and man. He was most exposed to arthritis deformans, the "cave gout" of Virchow. This disease was prevalent among the inhabitants of Europe, Egypt, Africa and North America. Later on, groups or tribes joined forces for protection against attack of other groups, tribes or natives, the very beginning of organization.

Lessons in camp sanitation, prophylaxis, quarantine and treatment of wounds, were laid down in Biblical instructions. Mutilation was practiced in peace and war from the earliest history of time. Amputation of fingers and toes was common 25,000 years ago. Circumcision was a widespread religious rite. Mutilation of the nose and ears and lips was at one time the universal way of punishing foes, thieves, and unfaithful wives, and to mark slaves. Plastic surgery for the correction of these deformities thus had its beginning, and in a way it reached a high stage of perfection, particularly among the Hindu races.

The Egyptians, consisting of forty-two tribes, were probably the first to develop specialization in medicine. Herodotus states that "each physician applied himself to one disease only." Medical and surgical care of the armies of the times was free. Military hygiene and policing of camps was remarkable. The diseased, the unclean and undesirables, were banished from the camps. Their stringent rules for clean and moral living would be useful today.

The Egyptian physician was also a priest. He dressed modestly, in a loin cloth, sandals, a cowl, with short sleeves, and a belt to hold instruments; was smooth-shaven, and on state occasions and religious holidays, wore an artificial beard, the length of which was commensurate with his social rank. Among some tribes of Egyptians, women were the legal physicians.

The ancient Hebrews considered disease as an expression of the wrath of God, who conferred both health and diseases. Among the Hebrews, unlike other primitive people, the priests did not monopolize the art and science of healing. Moses assigned to them only the task of hygienic police for the segregation of leprosy and venereal diseases. According to Fielding H. Garrison, the historian, the ancient Hebrews were the founders of prophylaxis. They knew about sterilization by fire. They had sanitary regulations for diet and water. The eating of blood was forbidden.

Herodotus tells how the fierce Scythians in the seventh century overran the Assyrian conquerors of Egypt and India and drank the blood of their enemies, using skulls as drinking cups. Up to the seventeenth century, human blood was taken as a cure of epilepsy. The Arabians believed the blood of Kings to be a cure for hydrophobia and demoniac possession. In Ireland, blood from people named Keogh, Walsh or Cahill, was believed to cure toothache. Imhotep, born about 3,000 years before Christ, became the Egyptian God of medicine and was, according to Sir William Osler, the first figure of a physician to stand out clearly from the mists of antiquity. He occupied a position comparable to that of Aesculapius.

So on down the ages. At one time, all human affairs were conducted by guild organizations . . . . the days of the guilds, priests and barber surgeons. Our medical organization is the sole survival of the guilds of the middle ages. This is not just an historical event or accident. It has survived because it always has had, does have, and always will have and set forth, a real and definite purpose, to meet real and humanitarian needs.

RELIGION AND MEDICINE

Medicine is one of the most ancient of callings. Its very earliest practice was to worship some deity. In fact, medicine and religion were generally inseparable. As an example, in Egypt it was the priest-doctor who established the schools of medicine in the confines of the temple. Within its enclosed gardens, he planted, cultivated and studied herbs which he believed to have medicinal value. It was here that botany first received serious study.

It was on occasions of pain, distress, misery and suffering that man turned from his worldly affairs and pleasures to his god, imploring relief from the agony that gripped and crushed him. It may have been gastric crises, gallstones or renal colic, raging and devastating fever, general peritonitis, or some serious or mortal injury. At these times, men found but little relief from human administrations. They readily turned to the supernatural and the powers outside themselves. In the consoling words of the priest, and in their own supplications, they found a measure of mental comfort and relief.

This dual relationship of medicine and religion existed centuries before Christ, and in a way has persisted to the present day. However, science and not religious beliefs, has explained to us the etiology of disease and the various degenerative processes of the body. Nevertheless, a large part of our best hospitals are listed as church hospitals. From the monasteries we derived the name hospice or hospital. The church was interested in sick bodies as well as sick minds. The name hotel de Dieu, or Hotel of God, is not uncommon in latin-speaking countries, or even in this country. Today, even, the belief that mental or physical illness—and on occasion they are one and the same—is based on the belief that some commandment of God has been broken, still holds sway with many people. Disregard of moral and physical laws has its train of unhappy consequences.

It is thus with not much difficulty that we see the origin of the practice of medicine. Nor is it far-fetched or fantastic to liken it to religion. Usually, the medical student chooses his profession voluntarily. He feels called to administer to the sick. After due preparation he is initiated into the mysteries of the human body, the art of gleaning from the patient the story of his illness, the search for objective symptoms, the unraveling of the etiology of disease, its mode of transmission and, lastly, the remedies to be used in combating, or staying, the disease process.

Soon he finds that he must also deal with the patient's mind, his attitude toward illness, his social and economic problems, as well as the bacterial forces which have gained a foothold within his body. He learns of the follies and weaknesses of the individual. As with the priest and the confessional, these facts are rightly treated as confidential and not to be divulged to others. They are sacred and confidential between doctor and patient. From the very beginning, the relationship of doctor to patient has been analogous to that of worshipper and priest. It is upon this sacred relationship that the doctor's greatest therapeutic agents are founded—faith, trust, hope and confidence.

To further complement the idea of medicine as a religion, we have our hospitals. These asylums of the sick are places of refuge, of retreat, of rest, and of easing weary and distressed minds and bodies. We think of the hospital as the Doctors' Church

—his Temple. It is here he observes, studies and perfects himself. It is here he learns new methods, collects material for new studies, observations and publications. It is here the Doctor works and lives. It is here that he beholds the joyous phenomena of birth, of the arrival of new souls into the world. It is here that he observes the seven ages of man, from the lusty new-born babe to feeble, shaking, old age, deprived of mental acumen and worn in body.

To the physician, death presents many tragedies. The doomed are loathe to leave life, with all its suffering and troubles. The frayed nerves of the grief-stricken relatives add a burden to the shoulders of the doctor. It is his calling, his office, his obligation, his duty to play the leading role in this drama of life and death, whether grievous or pleasant.

HUMANITARIANISM IN MEDICINE

Literature, the portrayer of life and its realities, always contains a background of tragedy, from Homer's Iliad and the dramas of Sophocles and Euphrites to Shakespeare and Isben. Biblical writings are essentially tragic. Comedy and light literature afford a brief hour of rest to overstrained humanity. Through mythology, the fantastic religion of the ancient Greeks, there runs a vein of philosophy, fundamentally sound and truly characteristic of those people. Those early people had seen clearly that without intense struggle, without tragedy or near-tragedy, no human progress or development was possible.

In medicine, the ancient Greek saw inevitable tragedy at its source. Aesculapius was delivered after the death of his mother, and, much after the fashion of Remus and Romulus, was kept with a herd of goats and fed on their milk for years, living among the barbarous centaurs, from whom he learned a sort of materia medica.

Necessity and tragedy have developed the best in organic life. Knowledge is fragmentary and sometimes contradictory in its efforts to teach fundamental truths. Free will and predestination continue their dispute; absolute justice and mercy have not been reconciled; philosophy is confronted with its own peculiar predicament. Yet, the humanitarian factor in life rises like a huge iceberg dead ahead in the course of a speeding ship.

As to the origin of the humanitarian, there is wide difference of opinion and much dispute. Like Poe's raven, a rare and mysterious visitor, it may have been driven by adverse winds and storms to these inhospitable shores from the golden gates and gardens of the Hesperides. Whatever its origin, however incompatible with the struggle for existence, the fact remains that humanitarianism is a power in public, a molder of ideals, and a director of human actions. It is full of force, enthusiasm and promise. Like Hercules of old, on occasion it sallies forth and accomplishes heroic deeds. Thousands of physicians now give, always have given, and likely always will give, their time, their strength, and their services without thought of compensation, for the relief of suffering and to save life. The aged and tired physician faces the night and storm to relieve the poor, the shiftless and the needy. The young intern spends the night in carrying a patient through an emergency or a postoperative crisis.

Not hope of reward here or hereafter, not even the peace of mind that smooths their pillows, but the humanitarian urge to relieve suffering and restore health is the inherent and impelling force in this service. From its earliest history, humanitarianism has been entrusted to physicians to such an extent that it has taken its place as a permanent factor in the environs and household of medicine.

Nearby are found the homes and hovels of poverty and sickness, of suffering and want, of the crippled and the incapacitated, and of the needy and neglected. By helping these, the physician has obtained a wider and better human understanding, broader sympathies, and a keener and a kindlier insight into the perplexities and tragedies of life. Every doctor who has sweat blood and brought a patient from the jaws of death, is thereby changed and made better; again, humanitarianism. Nothing builds itself into the fibre structure and development of the human race more definitely and more permanently than does the humanitarianism of medicine.

IDEALISM IN MEDICINE

Idealism, as an abstract conception of an ultimate object of attainment, conceived as supremely excellent, strikes one at first thought as being entirely foreign to, if not altogether opposed to science.

In medicine, science demands of us what we know. Idealism, on the other hand, asks us what we believe. Modern medicine boasts of its exact knowledge and its unwillingness to accept mere theory as a permanent concept. Yet, no less an authority than Osler says: "No other profession can boast of the same unbroken continuity of methods and ideals." To most of us, the ultimate goal of professional endeavor, as with all other things, is *success*. But what is success in

medicine, and by what standard is it judged? Who is the successful doctor? How are we to gauge success in medicine?

Surely the most successful doctor is not the one with the largest practice, or the greatest number of patients. I firmly believe that there is but one standard by which real success in the practice of medicine can be measured. This success is idealistic, and is to be found only in the heart and mind of the *individual himself. Its name is contentment.*

If the doctor feels that in spite of occasional failure, he is progressively doing more for his patients; if he is happy in his work; if regardless of fee or publicity he loves to operate when and where surgery is indicated; if he is happiest driving long weary miles to help some poor and needy patient; if the atmosphere of the autopsy room and the revelations of the autopsy table stimulate him to better work; if his greatest pleasure is found among the retorts, graduates and test tubes of the laboratory, then he is successful in his chosen vocation, regardless of what others may think or say.

Professional idealism, like religion, is not a mere creed or confession of faith. According to Anders, it "Must rest upon a true sincerity of purpose." Impulse is not purpose. Purpose requires sustained effort for the attainment of its ends.

The title, *doctor* represents a dignity bestowed upon the members of our profession as denoting knowledge, ability and willingness to teach in matters of health, and further implies a sincere belief in and devotion to the doctrine we profess. Our fathers in medicine accepted not only the dignity of a learned profession, but all its obligations as well. To the doctor of the past, medicine was indeed a divine vocation. The doctor of old gave his life to his profession. He found in his work all that he desired of pleasure and relaxation. To him, ethics was not a set of rules formulated by a medical hierarchy, but was a code of honorable conduct toward his fellows, both patients and doctors.

We revere the old time doctor. He was to his people as a prophet, one set apart and enjoying an affinity with the divine. People came to him not only with their physical ailments but with their many other worries, for counsel and advice. In a way, he was Judge, Lawyer and Jury in his community, always just, honest and fair. Even his human weaknesses and shortcomings were readily forgiven in the remembrance of his benevolence, his self-sacrifice, and his wisdom. What he lacked in scientific training, he made up by a generous heart and a broad understanding of human nature.

THE ETHICS OF MEDICINE

Since the most ancient times, physicians have been governed by a code of ethics, the principles and precepts of which differing somewhat according to whether the code was Egyptian, Greek, Medieval or early Christian, through all of which there ran the guiding moral conception of the duties and obligations of the physician.

Some 2,400 years ago, when Greek medicine was in its glory, came Hippocrates, the great mind of medicine. His contemporaries and associates were Plato and Socrates. Out of this association developed the "Oath of Hippocrates." It is the pledge of the physician of today. It is given to him as he is invested with the dignity and obligations of his calling. In the first paragraph of this oath is lain down the very foundation of Organized Medicine. It has survived these many centuries because it is founded on truth. It is as vital today as it was when uttered, many years before Christ. According to history, medical ethics goes back to Babylon, 2250 B. C., when Hammurabi engraved a code of ethics on stone.

Garreston's history of medicine states that the first actual license to practice medicine was issued by the Emperor Frederick II, by an edict in 1224. This edict set forth definite rules and regulations relative to the practice of medicine.

Many have the idea that "ethics" mean "rules and regulations." It is not even an oath. I think that ethics relate not so much to human character and conduct as it does to ideals. I mean, moral ideas and customs. It may be said that it is the pursuit of true happiness, the highest good, which may be either egotistic, utilitarian or altruistic. We may ask, what is the highest good? Philosophers have named it as perfection, as duty, and the intuition that one has as to moral value. For some there is the sense of duty to do certain things and abstain from others. Where arises the authority of the sense of duty to command or prohibit action, as the case may be? It is our own authority, and it is self-imposed. Also, there is the religious sanction, which rests on the authority of God, or the Church. Then, there are the political and the social sanctions, exercised by society.

What of the motives of moral conduct? It has been said that the natural inclination of man is not always strictly moral. This brings up the problem of motives. What induces people to resort to any particular line of action? The individual may hope to obtain happiness, or avoid fear, pain and misery. Also, there is the personal hope of heaven, the personal fear of hell, and the fear of the

police, punishment of any sort, and public opinion.

In 1803, Percival, of England, published a code of medical ethics. The product of this man's fine mind and human sympathy has a profound influence on all practitioners of medicine since that day. Ethics suggest etiquette toward each other, and the touch of professional courtesy. Osler's creed comprised three personal ideals with which every doctor is or should be well acquainted.

AMERICA TODAY

Today, the medical care received by the American people is the envy of the rest of the world. In no other existing nation has medicine wrought so well in bringing health, happiness and longevity to life.

The very theory of socialized medicine is wrong. We cannot standardize people. Old Lycurgus tried it during his reign and failed utterly. We can educate them and coöperate with them, but that is about all. It is claimed by the advocates of socialized medicine in this country that facilities for preventive medicine are wholly inadequate. By way of comparison, the following data are interesting:

In the ten-year period, 1925-1935, diphtheria increased in Germany and England, where they have socialized medicine, while in the United States it decreased 65 per cent.

In England, during the same period, tuberculosis decreased 28 per cent, while in this country, where it is claimed medicine is lagging, it decreased 45 per cent.

As further evidence of our superiority, we have: (1) New all-time lows for all causes of death; (2) a new increase in the average life span, setting a new world record; (3) a death rate decrease of 36 per cent since 1911; (4) the highest life expectancy in the world for the American child; (5) more money on time deposit than all the rest of the world; (6) more radios than all the rest of the world; (7) one auto to every four people in the United States; (8) more money spent on vacations than all the other countries in the world; (9) the greatest industries in all the world; (10) the highest standard of living; (11) the highest standard of wages; (12) with one-seventh of the population of the world, 60 per cent of the telegraph and telephone communications of the world; (13) 33 per cent of the railway transportation; (14) 80 per cent of the motor vehicles; (15) 87 per cent of the radios; (16) 95 per cent of the bath tubs; (17) one-third of the world's electricity, and more than four-fifths of the world's natural gas.

The average life of the American doctor today is 64.1 years. The average age of medical school graduates is 26.8 years; therefore, the average graduate has 40.71 years to devote to the practice of medicine.

In 1900 there was one person of 60 years of age or over in every twenty members of the population of the United States. In 1930, there was one to every twelve. In 1960, there may be, and should be, one in every six.

All in all, we have the greatest and fartherest reaching civilization ever known to man. This has largely been made possible through the efforts of the medical profession.

We are even now making history. On the activities of the doctors of today rests the medicine of tomorrow. As Schiller said, "for in today already walks tomorrow." May we jealously guard our dignity, and be true to the traditions and ideals of our profession. May we continue to dispense charity with a free hand to all who are in need, but may we do it in the name of the medical profession, and not in a way to bring glory to extraneous organizations. May we jealously guard the interests of our profession against the encroachment of governmental or lay agencies which will ultimately deprive us of professional rights and dignity.

Let us forget personal profit and glory for the moment, losing our individuality not for the State or some lay organization, but for the general good of the profession. By so doing, we may not profit financially; we may not gain fame or win patients, but we will achieve the reward of contentment, which in itself is success, maintain the position of the doctor in its wanted place in human society, and by so doing, *make practical the ideals of our profession.*

BLACKWATER FEVER FROM SPIDER BITE

An unusual case in which blackwater fever was caused by a spider bite is reported by Henry B. Gotten, M. D., Memphis, Tenn., and J. J. MacGowan, M. D., Ashland, Miss., in *The Journal of the American Medical Association* for April 20.

They say their case is interesting for two reasons, one, that it is the common impression, particularly in their section of the country, that blackwater fever is caused only by malarial infections, and two, that it is commonly thought the "black widow" spider is the only one which will cause a profound illness, whereas in their patient the disease was caused by a spider of another species.

Blackwater fever is a condition in which massive amounts of the red blood pigment are excreted in the urine with the absence of red blood cells or with an insufficient number to account for the alteration of the urine. The large quantity of pigment is sufficient to render the urine very dark or black in appearance.

Their patient was a girl, aged 3, who was bitten by a large brown spider. Following a blood transfusion the child rapidly improved and when last heard from had resumed her normal activities.

MEMORIAL ADDRESS*

JOHN M. FURMAN, M. D.
FORT WORTH, TEXAS

You have heard the roll call of our beloved members. We are met today in their honor. It is a rare privilege to speak in their memory.

Respect, reverence and love for those who have gone before, are hallmarks of any worth while civilization, and in paying them this tribute we are honoring ourselves.

The three highlights, the three salient facts in the normal cycle of individual human existence, are first, birth and development, second, maturity and achievement and third, death.

Birth is ever and everywhere acclaimed with joy and congratulations.

Maturity and achievement stimulate our imagination and command our respect and admiration, in direct ratio to their worthiness and usefulness. They constitute our true monument, the real reason for remembering that we have lived.

But death is sure, it is inexorable, it is inevitable, it comes to each and every one of us, and is as much a part of the scheme of existence as are birth and maturity.

Our reason tells us that death should be accepted in the same spirit, and its necessity and its usefulness recognized on a parity with the other two phases.

That is possible only when the personal, when the individual equation can be ruled out, for with the passing of a near and a dear one, a heart vacancy is created, a bitter, a bewildering blow is dealt our sensibilities, that time alone can partially fill and soften.

For the general good we must stifle as best we may our personal feelings and desires, and attempt to accept this last step in the natural cycle with the same equanimity that we do the others.

To approximate this we must ever bear in mind that each of these loved ones has had his opportunity for self expression, has had the joyous privilege of living. He has achieved according to his abilities and environments, and has written his own record for general evaluation. Any criticism, any comparison by us would be invidious, for

> " 'Tis nature's law, that perfect code by love inspired,
> Of him on whom much is bestowed, much is required.
> We do not ask the wren to go up to the heights the eagles know,
> Nor yet expect the lark's clear note from out the dove's dumb throat."

No appraisal can consider only apparent services, for each one's hopes, aspirations, ideals and visions may have wielded far wider and more useful influence than brilliant successes more volubly acclaimed.

Time rolling his ceaseless course has put a period to each of these earthly careers, and they have vanished from the scenes of their labors. Reverently the world says, "May they rest in peace." But to us it is unthinkable that the gallant spirits that are these men, who have served as we know they have served, whose efforts and progress have been constant from the cradle to the grave, could be satisfied with any conception that we can have of an eternal rest, of an eternal peace that involves or implies inaction.

Rather, we are impelled to think that each of these dear ones, taking the sum of his abilities and accomplishments for a staff, has paused briefly by the wayside, and has resumed his journey refreshed. And in new environments, and with their wonted energy, and with a broader and clearer view, they are now pressing eagerly, happily forward, to further horizons of usefulness, to higher planes of service, through that eternity that awaits us all.

Of these gallant spirits we can proudly say, they now belong to the ages.

And at each hallowed spot, where rest their ashes, ever precious to us, we may fondly say

> "Bright summer sun shine kindly here,
> Warm southern breeze blow gently here.
> Green sod above, lie light, lie light,
> Good night dear heart, good night, good night."

In silent tribute to these loved ones whose earthly voices are forever silenced, I will ask you to stand with me for a moment.

*Delivered at the Memorial Services of the State Medical Association, Dallas, Texas, May 14, 1940.

MORTALITY RATE FROM PERITONITIS AFTER APPENDICITIS DECREASES

The mortality rate from peritonitis (inflammation of the membrane lining the abdominal walls) complicating appendicitis was 17.22 per cent from 1934 to 1938 as compared with a rate of 33.9 per cent in operative cases alone during the period from 1915 to 1933, Mont R. Reid, M. D., and William P. Montanus, M. D., Cincinnati, report in a comparison of two series of cases, published in *The Journal of the American Medical Association* for April 6.

In their analysis of 1,153 cases of appendicitis treated at the Cincinnati General Hospital during the years 1934 to 1938 inclusive the authors found a total death rate of 4.86 as compared with 6.4 per cent during the period 1915 to 1933 inclusive. The rate of 17.22 per cent in peritonitis represents the most gratifying decrease. The very slight drop from 11.4 per cent to 10.08 in the group with abscess complicating appendicitis they consider discouraging. Greater conservatism in treating such patients, they say, might have resulted in a decreased mortality.

TRANSACTIONS

SEVENTY-FOURTH ANNUAL SESSION

OF THE

STATE MEDICAL ASSOCIATION

OF TEXAS

DALLAS, TEXAS, MAY 13, 14, 15 AND 16, 1940

MINUTES OF THE HOUSE OF DELEGATES

Monday, May 13, 1940

FIRST MEETING

The House of Delegates was called to order by the President, Dr. L. H. Reeves, of Fort Worth, at 10:00 o'clock a. m., May 13, 1940, in the Empire Room, Hotel Adolphus, Dallas, Texas, with an attendance of eighty-two delegates.

Dr. Tate Miller, of Dallas County, then presented the first report of the Reference Committee on Credentials.

President Reeves: First, we will have the roll call and announcement of results.

Secretary Taylor: The chairman of the Reference Committee on Credentials reports 82 members present, which is a quorum.

On motion of Dr. E. W. Jones, seconded by Dr. F. P. Miller, the roll call was dispensed with and the membership of the House established as the roll, checked and approved by the Reference Committee on Credentials, as follows:

MEMBERSHIP OF THE HOUSE OF DELEGATES*

Anderson-Houston-Leon—H. R. Link.
Angelina—T. A. Taylor.
Atascosa—R. B. Touchstone.
Austin-Waller—H. E. Roensch.
Bastrop—J. Gordon Bryson.
Baylor-Knox-Haskell—T. S. Edwards.
Bell—M. W. Sherwood.
Bexar—L. B. Jackson, Walter G. Stuck.
Bosque—V. D. Goodall.
Bowie—J. N. White.
Brazoria—A. O. McCary.
Brazos-Robertson—R. B. Grant (J. G. Sanders).
Brown-Comanche-Mills-San Saba—J. M. Campbell.
Burleson—G. V. Pazdral.
Caldwell—Edgar Smith.
Camp—P. A. Reitz.
Cass-Marion—A. E. Starnes.
Cherokee—J. M. Travis.
Childress-Collingsworth-Hall—E. W. Jones.
Clay-Montague-Wise—L. F. Crook.
Coleman—J. P. Board.
Collin—P. D. Robason.
Colorado—R. H. Bell.
Cooke—T. S. Myrick.
Coryell—J. T. Brown.
Crane-Upton-Reagan—E. V. Rawlins.
Dallas—Guy F. Witt, Hall Shannon, H. Leslie Moore, R. A. Trumbull, Geo. A. Schenewerk, Tate Miller.
Delta—O. G. Janes.
Denton—Geo W. Hinkle.
Donley-Armstrong—B. L. Jenkins.
Eastland-Callahan—J. H. Caton.
Ector-Midland-Martin-H-A-G—L. Alton Asher.
Ellis—S. H. Watson.
El Paso—R. B. Homan, Jr., F. P. Miller.
Erath-Hood-Somervell—S. D. Naylor.
Falls—L. C. Carter.
Fannin—C. A. Gray.
Fort Bend—G. C. Yelderman.
Galveston—W. F. Starley.
Grayson—W. A. Lee.
Gray-Wheeler—H. E. Nicholson.
Gregg—B. A. Swinney.
Grimes—S. D. Coleman.
Hardeman-Cottle-Motley-Foard—J. J. Hanna.
Hardin-Tyler—W. W. Anderson.
Harris—M. B. Stokes, E. L. Goar (Ghent Graves), J. E. Clarke, J. H. Turner.
Hays-Blanco—A. B. Cooper.
Henderson—L. L. Cockerell.
Hidalgo-Starr—H. E. Whigham.
Hopkins-Franklin—J. M. Fleming.
Hunt-Rockwall-Rains—J. W. Ward.
Hutchinson-Carson—L. E. Petty.
Jasper-Newton—W. F. McCreight.
Jefferson—T. A. Tumbleson, L. C. Heare (P. R. Meyer).
Johnson—M. T. Knox.
Karnes-Wilson—C. C. Quillian.
Kaufman—D. H. Hudgins.
Kerr-Kendall-Gillespie-Bandera—D. R. Knapp.
Kimble-Mason-Menard-McCulloch—G. H. Ricks.
Lamar—D. S. Hammond.
LaSalle-Frio-Dimmitt—B. E. Pickett, Sr.
Lee—E. E. Shivers.
Liberty-Chambers—A. R. Shearer.
Limestone—C. P. McKenzie.
Lubbock-Crosby—F. B. Malone.
McLennan—W. L. Crosthwait.
Medina - Uvalde - Maverick - Val Verde - Edwards - Real-Kinney-Terrell-Zavalla—Cary A. Poindexter.
Milam—C. G. Swift.
Morris—D. J. Jenkins.
Nacogdoches—S. B. Tucker.
Navarro—Fred W. Horn.
Nolan-Fisher-Mitchell—A. H. Fortner.
Nueces—C. P. Yeager.
Palo Pinto-Parker—J. H. McCracken.
Panola—W. G. Carnathan.
Pecos-Jeff Davis-Presidio-Brewster—M. E. Barrett.
Polk-San Jacinto—Ivison Grimes.
Potter—A. F. Lumpkin.
Runnells—O. H. Chandler.
Rusk—Lloyd Deason.
San Patricio-Aransas-Refugio—W. M. Dodson.
Scurry-Dickens-Kent-Garza-Borden-King-Stonewall—Grady Shytles.
Shelby-San Augustine-Sabine—W. H. Warren.
Smith—Thos. M. Jarmon.
Stephens-Shackelford-Throckmorton—P. C. Wray.
Tarrant—R. G. Baker, Jno. M. Furman, C. O. Terrell.
Taylor-Jones—Earl R. Cockerell.
Titus—Rufus D. Moore, Jr.
Travis—Banner Gregg.
Van Zandt—H. A. Baker.
Walker-Madison—W. B. Veazy.
Williamson—C. C. Foster.
Wood—T. H. Peterson.
Young-Jack-Archer—C. C. McClure.

EX-OFFICIO MEMBERSHIP HOUSE OF DELEGATES

President—L. H. Reeves, Fort Worth.
President-Elect—Preston Hunt, Texarkana.
Vice-President—W. A. Lee, Denison.
Vice-President—H. E. Griffin, Graham.
Vice-President—A. M. Long, Valley Mills.
Secretary—Holman Taylor, Fort Worth.
Board of Trustees—John T. Moore, Houston; W. R. Thompson, Fort Worth; J. B. McKnight, Sana-

*SECRETARY'S NOTE: For the sake of convenience, the list here given includes all who qualified for membership, and who were present at some time during the meeting.

torium; S. E. Thompson, Kerrville; W. B. Russ, San Antonio.

Board of Councilors—Ralph Homan, El Paso; E. A. Rowley, Amarillo; O. N. Mayo, Brownwood; C. E. Scull, San Antonio; J. G. Webb, Mercedes; Judson L. Taylor, Houston; A. E. Sweatland, Lufkin; H. F. Connally, Waco; T. C. Terrell, Fort Worth; M. L. Wilbanks, Greenville; C. A. Smith, Texarkana.

Committee on Legislation—L. H. Reeves (ex-officio), Fort Worth; Holman Taylor (ex-officio), Fort Worth; H. W. Cummings, Hearne; E. W. Bertner, Houston; Joe Gilbert, Austin; J. H. Burleson, San Antonio; E. C. Ferguson, Beaumont.

Council on Medical Defense—W. D. Jones, Dallas; Holman Taylor, Fort Worth; W. L. Baugh, Lubbock; W. A. King, San Antonio; A. P. Howard, Houston.

Upon motion of Dr. Hall Shannon, seconded by Dr. A. R. Shearer, the reading of the minutes of the previous meeting was dispensed with and the minutes as edited and published in the June, 1939, number of the TEXAS STATE JOURNAL OF MEDICINE, were adopted.

The secretary announced the appointment of the reference committees of the House, as follows:

REFERENCE COMMITTEES

Reference Committee on Credentials—Dr. Tate Miller, Chairman, Dallas; Dr. G. A. L. Kusch, Washington; Dr. T. S. Edwards, Baylor-Knox-Haskell; Dr. T. D. Vaughn, Lampasas-Burnet-Llano; Dr. George W. Hinkle, Denton.

Reference Committee on Reports of Officers and Committees—Dr. J. Harolde Turner, Chairman, Harris; Dr. R. G. Baker, Tarrant; Dr. T. A. Tumbleson, Jefferson; Dr. R. B. Homan, Jr., El Paso; Dr. C. C. McClure, Young-Jack-Archer.

Reference Committee on Resolutions and Memorials—Dr. M. W. Sherwood, Chairman, Bell; Dr. L. B. Jackson, Bexar; Dr. J. J. Hanna, Hardeman-Cottle-Foard-Motley; Dr. W. B. Veazy, Walker-Madison; Dr. M. E. Barrett, Pecos-Jeff Davis-Presidio-Brewster.

Reference Committee on Finance—Dr. Hall Shannon, Chairman, Dallas; Dr. J. M. Campbell, Brown-Comanche-Mills-San Saba; Dr. A. F. Lumpkin, Potter; Dr. J. N. White, Bowie; Dr. L. F. Crook, Clay-Montague-Wise.

Reference Committee on Amendments to Constitution and By-Laws—Dr. Guy Witt, Chairman, Dallas; Dr. J. M. Travis, Cherokee; Dr. D. H. Hudgins, Kaufman; Dr. B. L. Jenkins, Donley-Armstrong; Dr. S. H. Watson, Ellis.

Reference Committee on Scientific Work—Dr. C. G. Swift, Chairman, Milam; Dr. Cary Poindexter, Nine Counties; Dr. E. L. Goar, Harris; Dr. M. T. Knox, Johnson; Dr. L. C. Carter, Falls.

President L. H. Reeves then presented the President's Message as follows:

MESSAGE OF THE PRESIDENT

Two years ago, when this House of Delegates selected me as the leader for the present administration, I pledged my best efforts to the furthering of the cause of ethical, organized medicine in this State. I asked for the coöperation and support of the membership of this House of Delegates, and of the membership of this Association at large. I thank you for your belief and confidence, the opportunity to serve, and for the distinction involved.

The record of this administration speaks for itself. Due to our combined efforts, it appears that the administration has been one of achievement and progress. The status of medical organization in this State has improved, I feel sure. I consider that today our Association ranks second to none in the United States. I have seen a deeper meaning to duty and responsibility since I have been in office. I hope that I have played a definite part in this advance.

During the past year I have traveled extensively over the State in the interest of organized medicine and the good it may do. One or more of my medical conferees and associates in the work of the Association, have accompanied me on each trip. We have invariably been received cordially, given the greatest attention and extended the heartiest coöperation.

I have consulted and advised with my medical friends over the State. Their counsel and advice has greatly helped me in this year's work. I have exercised the greatest care in the selection of both Section Officers and Committee membership personnel. In these appointments, I have tried to make a thorough distribution of distinction, ability and willingness to serve being considered. Appointments have been made in every section of the State, from Texarkana to El Paso, Amarillo and Lubbock to Beaumont, Galveston and Brownsville.

I am pleased to be in a position to announce that now, for the first time in history, the State is completely organized into county medical societies. There are two hundred and fifty-four counties in Texas. They are now grouped into one hundred and twenty-nine component county medical societies. I believe only eleven other states in the union are completely organized, and they average about forty counties to the state.

In the meanwhile, our membership has been increasing. There are, at this time 4,076 members for this year, as against a total membership of 4,348 for 1939, which was in itself an increase of 147 members over the previous year, and membership dues continue to come in.

On the whole, our county societies are functioning quite satisfactorily. Some of them, of course, are more active than others. I believe the tendency is in the direction of satisfactory activity, and solidarity in organization. Our very excellent and active board of Councilors is giving this matter attention. There is no reason why it should not be so. At this time there are active, well-informed and wide-awake physicians located throughout the State. No longer is it true that the larger towns and the cities claim the practicing physician as soon as he develops special skill or reputation in any line of practice. Well-equipped, progressive small hospitals are found in most so-called rural sections of the State, which fact undoubtedly underlies this condition and makes it possible.

I believe that our doctors are beginning to realize that there is more to the profession of medicine than the science and art thereof. In short, in this day and time if the medical profession does not take steps to protect its interests, its interests will suffer; and as a corollary, it may be said that when the interests of the medical profession suffer, the interests of its dependent public suffer. For that reason, the medical profession, individually and collectively, must take an interest in the business affairs of their respective communities, and particularly in the affairs of politics. Very definitely, our organization is not political—however, very definitely its members must participate in politics to the extent that proper influence may be exerted upon those in authority in our state government, particularly legislators, in the interests of medicine and the public health. No others are in a position to take care of these interests. This is the day of individual responsibility for the doctor. It is also the day for collective responsibility. Both may and must be enhanced through participation in activities of organized medicine.

One of the most important obligations assumed by the medical profession is that of educating the general public on the subject of health. In discharging this obligation we cannot and must not fail to include in our advice to the public, the baneful effect of

quackery on the health of the people. Many times we are too prone to hesitate in discharging this obligation, for fear that our motives will be impugned. The truth of the situation is, the people suffer from the ghoulish depredations of quacks, whereas quite probably in due time the medical profession profits financially therefrom. People should be told the deathly secrets of the quack. However, before the medical profession can teach the public, it must itself become more conscious of this medical masquerade. The average doctor knows intuitively about these matters, and quite likely will think correctly along these lines, but unless he is coached and cautioned, he will probably do nothing about it. In my visits over the State, I have addressed both medical and lay audiences—from the platform and by radio, about these things. I have had splendid attention through it all.

Through the coöperation and financial support of the State Health Department, our Committee on Post-Graduate Medical Education has succeeded in organizing a clinical course of instruction of three weeks duration, in each of our two medical colleges, on the subject of maternal and child health. There are to be twenty scholarships for each institution, and the courses will be given in each institution from May 20 to June 15. The State Health Department will defray the expenses of these courses, and allow each student necessary funds to cover expenses of attendance. The Committee on Post-Graduate Medical Education will render a full report on this movement. My purpose in mentioning the matter is to direct the attention of the House of Delegates to a system of coöperation which has been inaugurated, primarily to care for this situation.

Before endorsing the proposal of the Health Department that these courses be established, the Executive Council met in conference with the Committee on Post-Graduate Medical Education, and the Committee on Maternal and Child Health. The Executive Council took occasion to call into the conference such committees as have been concerned in the matter of post-graduate medical education in coöperation with the State Health Department. So successful was the conference, and so promising the results along the same lines in other particulars, that it was decided that the several committees concerned should be combined into a so-called Council, with the Committee on Post-Graduate Medical Education serving as the permanent part of the Council, the membership of the other committees being included in an ex-officio capacity. I have asked our Committee on Revision of the Constitution and By-Laws to provide the necessary amendments to put this plan in operation. That committee will report accordingly, and I recommend the passage of the amendments thus submitted.

The pediatricians of our State have for several years been very active in bringing their specialty to the attention of the medical profession. They have heretofore suggested that an independent Section on Pediatrics be established. The proposal has been considered unofficially now for several years. There have been those who feared that by taking the pediatricians from the Section on Medicine, both groups would suffer, not merely in the matter of attendance on the larger section, but because of the inter-relationship of general practice and pediatrics. It is my opinion that these fears are groundless, and that we should grant the pediatricians the new Section they seek, and I so recommend. In making the recommendation, I would call attention to the fact that under the recent re-arrangement of our meetings, the time of the Sections has been so restricted that they really do not give contributors the opportunity they should have to present papers. I do not think the guest for the Section on Pediatrics should be taken from the two guests allowed the Section on Medicine. There should be an additional guest for the additional Section.

For some years our Trustees have been endeavoring to secure endowments for our very excellent library. So far this effort has been without success, at least immediate success. Through numerous conferences, a plan has been devised which it is thought will enhance our opportunities for securing endowments for the library. Assuming that these plans will soon materialize, I have appointed a committee, the purpose of which is to make an extensive campaign, in and outside of the medical profession, seeking donations of funds to this worthy purpose. The plan in contemplation will insure the perpetuation of such funds for the purpose for which they are donated, through an organization coincident with, but independent of the State Medical Association. Although this committee will offer no report at this meeting, it has already become active.

The Executive Council will recommend that this House of Delegates direct the Council on Medical Economics to provide a plan for the better distribution of medical service than is possible under present circumstances, and that our Legislative Committee be directed to prepare and secure the passage of any State law necessary for the operation of such a plan. I recommend the adoption of this suggestion, provided only that such plans when so evolved, will operate under full and exclusive direction of the medical profession; that they will not permit the intervention of any agency whatsoever between the doctor and his patient, and that the standard of practice not be lowered. Such plans are being prepared by numerous other states, and a similar plan covering hospital service is already in operation in this State. I do not believe that the people of Texas need such an artificial agency, but if there is a demand for it, the medical profession should and must meet the demand.

I would call particular attention to a certain activity of our Committee on Fractures. We are all familiar with the fine work of this committee in connection with our Scientific Exhibits. We now have to commend the committee for a series of articles which it has prepared and released through the newspapers of the State. These releases were under the title, "Leave 'Em Where They Lie." They were informative to the public because they explained in the language of the layman, the practical thing to do in emergencies. Copies of these releases have been sent out by our State Secretary to other State Medical Associations, and they have created a great deal of comment, with several requests for permission to reproduce them in newspapers of other states.

Continued efforts have been made by my administration to coöperate with the State Health Department in all of its functions in which we should be interested. I have appointed on each of our committees having to do with subjects of importance to the State Health Department, an ex-officio member from the staff of the department. This plan has proved to be worthwhile and workable, and satisfactory in every way. I trust that it will be continued. A new committee has been appointed in the interest of the Department, a group qualified to deal with all phases of pneumonia, preventive and curative, and from the combined angles of the medical profession as a whole and the specialty of public health. This committee will report at this meeting. It has done and is doing a fine work.

We have also coöperated with the State Board of Medical Examiners, and reports will be made by several agencies of the Association with regard to this particular matter. Of importance is the coöperation of our Board of Trustees, Council on Medical Defense and the Legislative Committee, in the defense of the Medical Practice Act, at no little expense. I desire to extend my thanks, officially and

personally, to our Attorney General for permitting the attorneys of the State Medical Association to enter as co-counsel in the defense of a very important phase of our Medical Practice Act, the citizenship requirement. I desire also, to express my appreciation of the splendid services rendered and of the really notable brief prepared by our attorneys in this case. The decision in this case meant much not only to the medical profession of Texas, but also to the other 22 states in the union having a similar law relative to American citizenship.

We have continued in close coöperation with our Woman's Auxiliary. The two organizations have worked together harmoniously, and to the advantage of the cause of medicine. Because of certain matters which are pending, about which the State Medical Association may not be able to do as much as it should, the Woman's Auxiliary may be called upon to perform a very important service to the public. These matters are well in hand between the two organizations, and I content myself with suggesting the continued close coöperation of the two groups. A difficulty here is the inability of the State Medical Association, through its established agencies, to utilize the services of the Woman's Auxiliary to the fullest extent.

One of the most serious problems confronting the medical profession of Texas, and indeed the entire South, is the Negro physician. What to do with him, in the light of social and professional implications, is a real question. Beyond a doubt it is the earnest desire of the medical profession as a whole to do everything possible to improve his status, including the advantages to be had from properly conducted medical societies. It seems difficult to provide these and many other advantages the Negro doctor should have. However, the plan adopted by this House of Delegates last year, wherein the Lone Star State Medical, Dental and Pharmaceutical Association is recognized as representing the ethical Negro medical profession of this state, and wherein a liaison group of officials of our Association to meet a similar group of their Association is provided, appears to be most promising of the desired results. The report of our Liaison Committee to this House of Delegates will show that a fine start has been made. I hope this House of Delegates will give most careful consideration to this report and its recommendations. Perhaps a similar procedure in each of the Southern States will tide over an interim difficult to cover otherwise.

At this time I would make a plea for the most careful selection of officers of this Association and its component county societies. It is through these agents that we must accomplish our purposes. They should, and indeed must, be leaders. Leadership involves two important factors, knowledge and ability. Knowledge is attained through study and through experience. Ability is inherent. It is strictly up to us to develop our leaders, and we should begin while they are young and new in the profession, by interesting them in the work of our organization. There should be a sufficiently rapid turnover or change in office, to enable us to do this. Perpetuation in office should be tolerated only where special conditions seem to require it in the interest of efficiency, and in the light of results. Change should not be made for the sake of change. It should be made for the sake of development and ultimate results.

Finally, let me reiterate my suggestion that we continue assiduously to solidify our organization, to the end that it be ready if and when called upon to serve as a semi-official agency of the government in the field of medicine. No one outside of the medical profession can possibly know about such things; hence, if those matters are to be cared for at all satisfactorily, it must be done directly or indirectly by the medical profession. We cannot afford to be found wanting when called upon. Indeed, we are now being called upon, and we are now meeting the issues. The public must and will learn to depend upon us in these matters, as they have heretofore learned to depend upon us in the matter of medical care.

President Reeves: The President's Message will be referred to the Reference Committee on Reports of Officers and Committees.

The secretary then read his annual report, as follows:

REPORT OF THE SECRETARY

The office of the Secretary has been sorely beset from time to time during the past year, but through extra effort and application the affairs of the Association have been properly attended to without the necessity of increasing the office force beyond the usual requirement just preceding the annual session.

The report of the Board of Trustees will disclose that while there have been extraordinary demands for work and finance, except for the unpredictable necessity of engaging in some, to us very expensive litigation, we have gotten through the year quite nicely. At the instance of our Committee on Legislation, and proper officials otherwise, and under instructions from the Board of Trustees and the Council on Medical Defense, the State Medical Association joined the State Board of Medical Examiners, and the Attorney General of the State in supporting the citizenship requirement of our recently amended Medical Practice Act, the amendment concerned requiring full citizenship of each applicant for a license to practice medicine in the State. This requirement was attacked by an alien who desired to take the examination of the State Board of Medical Examiners, leading to license to practice medicine. Upon being denied the right to appear before the Board, among other reasons because he was not a citizen, he undertook by mandamus proceedings to compel the Board to admit him to examination, contending that the citizenship requirement of the law was in violation of the Fourteenth Amendment to the Constitution of the United States, under which amendment are extended to aliens the same rights enjoyed by citizens, in-so-far as making a living is concerned. Our attorneys contended that the right to practice medicine is, in addition to being a right, a privilege, and that privileges are extended through legislation, upon terms decided by legislatures. The practice of a profession is not exclusively a right, hence does not in any sense violate the Constitution of the United States. It seemed extremely desirable, and indeed necessary, to spend money defending that which the Association had spent money securing. It is my understanding that this is a policy of the State Medical Association.

We have heard much of late concerning the extension of medical service to those of our people who are in the lower financial brackets in the matter of income. We have had to resist the encroachment of socialized medicine, and the wily and fatuous schemes of selfishly interested groups and radical element of our country, looking to the ultimate regimentation and control of the medical profession by the government. In self-defense, and not so much because it is necessary that something of the sort be done, the organized medical profession throughout the country has been planning and trying out plans for the better distribution of medical service, whether bettered in the matter of lowering the costs of medical service, or extending credit to cover the costs of medical service. There seems to be an approachment between the government and the leadership of organized medicine, by which it may easily transpire that results will be accomplished through the joint efforts of the government and

the medical profession without any material disturbance of the present system of personal practice of medicine. If anything of the sort is to happen, most certainly the medical profession must be ready to do its part, and it will not be ready to do its part until and unless county medical societies are completely and fully organized, and willing to assume at least semi-official connection with the administration of measures decided upon. We cannot restore the medical guilds under a Democracy, and there seems to be no demand for their restoration, but it should be noted that what is about to happen will be equivalent to something of the sort, and organized medicine must be ready.

I am happy to report that each county in the State of Texas is now covered by a county medical society. Some of these societies are quite active, both in the matter of the study of medicine and the study of medical economics and related problems, while others are rather indolent about such matters, and seem not to be greatly concerned. Revival of interest in those societies inclined to be dormant is primarily the concern of the councilors involved. However, other officials, and even the rank and file of the membership may help, and they should all help. Unless the medical profession takes control of the practice of medicine, now that control may be offered, others will see to it that there is control, in the details of which, in all probability, the best interests of neither the medical profession nor the public will be best served.

The total membership of the Association for 1939 (calendar year), was 4,348. Membership during the previous year was 4,201. There was, therefore, an increase in membership of 149. That is not bad, but it may be pointed out that quite probably the increase represents fairly well the percentage of increase in medical population. It should be comparatively easy, however, to add to our membership several hundred qualified members, and if those physicians outside of the organization who are acceptable could be made to see the advantage, if not the necessity of joining their respective county societies, most of them would undoubtedly do so. Already this year dues have come in for 4,062 members, which appears to be a little better rate of increase than is usually the case.

Annual Session.—Our annual sessions have become so complicated and the factors involved ramify so variously, as to call for an ever increasing expense in putting on the show. The Trustees will report upon the finances involved. It is sufficient for the occasion that I merely point to the situation. It seems important that this House of Delegates understands, and that our members understand, as for that, that we have long since passed the horse and buggy days in medical organization work, particularly in the matter of our meetings. Those in charge of developments in our Association long since decided it would be wise to take on some of the features of the so-called clinical congresses, which were new in medical society activities. It would appear that we have profited materially from this policy, both in the matter of the entertainment and instruction, and in popularity with our members. It should be remembered, however, that one of the prime purposes of our Association is to develop producers of medical literature in the rank and file of the medical profession of the State. That means that we must make room on our scientific programs for contributions by our own members, a thing the clinical conferences are not expected to do, and do not do, as a rule. We have tried to strike a golden mean between the two extremes, and it would appear that we have very nearly done so. Doubtless there are opportunities for improvement, and doubtless those in charge of our meetings will continue to make improvements, but it will help a great deal if those who attend our meetings will make suggestions for improvement in procedure. If this is done, our conception of things will be greatly broadened.

It should be of interest in this connection that our technical exhibits are an important feature of our meetings, not alone that they offer an opportunity to view many items of interest to us in connection with our daily work, but that thus a considerable portion of the expense of our meetings is met. We owe it to these exhibitors to visit their exhibits, whether or not we patronize those who present them.

Nor should we neglect our scientific exhibits, and our moving picture exhibits. There is so little time for so much activity that we are inclined to overlook these very interesting features of our meetings. In the preparation of the scientific exhibits and the films, and in their presentation, much work and no little money has been expended. It is all for our benefit. We should lend those responsible such encouragement as will keep them at it.

The following changes in the organization have been made during the year:

The complete organization of the state was perfected by the following changes in the county society setup:

Brown-Comanche-Mills-San Saba Counties Medical Society was made up by the addition of Comanche county to the existing Brown-Mills-San Saba Counties Society. In order to do this, the charters of the Comanche and the Brown-Mills-San Saba societies had to be revoked. Date of new charter, September 9, 1939.

Donley-Armstrong Counties Medical Society is the result of adding Armstrong, an unorganized county, to the existing Donley County Society. Date of new charter, November 27, 1939.

Panola County Medical Society was organized November 24, 1939.

Reeves-Ward-Winkler-Loving-Culberson-Hudspeth Counties Medical Society was made up by adding the unorganized counties of Winkler, Loving, Culberson, and Hudspeth, to Reeves and Ward counties, which counties had until the reorganization been a part of Reeves-Ward-Pecos Counties Medical Society, the charter of which was revoked in order to arrange the new grouping. Date of new charter, November 13, 1939.

Pecos-Jeff Davis-Presidio-Brewster Counties Medical Society was the result of adding the unorganized counties of Jeff Davis, Presidio and Brewster to Pecos county, which county had until the reorganization been a part of the Reeves-Ward-Pecos Counties Medical Society, the charter of which was revoked in order to permit the rearrangement. Date of new charter, November 14, 1939.

The Austin-Waller Counties Medical Society is the result of combining the former Austin County Society and the Waller County Society. The charters of both organizations were revoked in order to perfect the union. Date of new charter, December 19, 1939.

An apparently desirable rearrangement, and one to which agreement has been had by all parties concerned, is that of joining the Walker-Madison Counties Medical Society with the Trinity County Medical Society. The rearrangement cannot be perfected until the councilor boundary has been changed. Walker-Madison Counties Medical Society is in the 9th district, and the Trinity County Society is in the 11th District. It is understood that the councilors of the districts concerned, and representatives of the county societies concerned, will ask for the desired relocation of the councilor boundary line during this meeting of the House of Delegates.

At the time this report goes to press, the following county medical societies have failed to pay dues for any of their members: Trinity, Coryell, Montgomery, and Upshur.

In addition, Lee County Medical Society had paid for only four members, which is one less than the five members required by the By-Laws for the maintenance of a charter.

The following societies had failed to file their annual reports: Bee-Live Oak-McMullen, Brazoria, Jasper-Newton and LaSalle-Frio-Dimmit.

The following changes in the official family have occurred during the year: Dr. G. T. Vinyard, of Amarillo, resigned as Councilor for the Third District, September 15, 1939, and Dr. E. A. Rowley of Amarillo, was appointed to fill his unexpired term. Dr. Rowley's term expires at this meeting.

Dr. S. C. Red of Houston, a member of the Committee on Collection and Preservation of Records, died February 25, 1940. His term of office as a member of the committee expires at this annual session, hence no successor was appointed.

Dr. W. F. Starley of Galveston, asked to be relieved of the Chairmanship of the Council on Medical Economics. Dr. Claude C. Cody, Jr., of Houston, long a member of the Council was appointed to take over the Chairmanship, and Dr. Starley remains a member of the Council.

The following Honorary Members died during the year: Drs. G. T. L. Bryan, Abilene; J. D. Duckett, Houston; Louis Goldstein, Beaumont; J. L. Herring, Mullin; C. L. King, Whitesboro; D. F. Kirkpatrick, Lewisville; R. H. Lasater, Mesquite; J. P. Masterson, Jasper; D. P. Richardson, Henderson; J. F. Roseborough, Marshall; John W. Tappan, El Paso, and Warren G. Young, Port Arthur.

This leaves an Honorary Membership of seventy-nine, and Membership Emeritus, 3.

The following nomination has been made by county medical societies, for Honorary Membership status:

Cass-Marion Counties: Dr. Wm. A. Starkey, Atlanta.

Denton County: Dr. Jessie L. Herrick, Denton (born in 1864; member State Medical Association, 1919-1939).

Ector-Midland-Martin-Howard-Andrews-Glasscock Counties: Dr. J. F. Haley, Midland (born in 1862; member of State Association 1904-1930; 1935-1936; 1938. Dr. Haley was elected an Honorary Member in 1935, but was dropped in 1937, because he was not so reported by his county society, and taken up again in 1938. His name was not included in the annual report by his society last year because of the illness of the secretary of the society.

Dr. J. T. O'Barr, Big Spring (born in 1851; member State Association 1904-1915; 1917-1921; 1928-1938. Dr. O'Barr was elected an Honorary Member in 1928, but his name was not included in the annual report of the county society last year because of the illness of the secretary of the society.)

Grayson County: Dr. J. L. Bow, Whitewright (born in 1865; member of the State Association 1905-1909, 1914-1919, 1935-1939).

Hill County: Dr. James S. McKown, Osceola (born in 1861; member of the State Association 1905-1912, 1917, 1919-1932, 1934-1937).

Dr. A. B. McPherson, Lovelace (born in 1861; member of the State Association 1910-1924, 1926-1939).

Lamar County: Dr. J. E. Fuller, Paris (born in 1862; member of the State Association 1904-1939).

Runnels County: Dr. James G. Douglas, Ballinger (born in 1874; member State Association 1904-1906, 1908-1930, 1932).

Tarrant County: Dr. I. A. Withers, Fort Worth.

It is a privilege to again acknowledge my obligation to the officers and members of the Association, and particularly of my staff, for the loyal support and intelligent help they have rendered me in the discharge of my sometimes difficult duties. I am particularly appreciative of the continued confidence evidently placed in me as an official of the Association. I could not if I would, estimate my competency in office, but I can say that whatever that may be, there is no question about my good intention. I have done the best I could.

Respectfully submitted,

HOLMAN TAYLOR, Secretary.

The report of the secretary was referred to the Reference Committee on Reports of Officers and Committees, with the exception of that part of it dealing with honorary membership, which part was referred to the Board of Councilors as a reference committee.

Secretary Taylor: May I add to my report nomination of Dr. Ralph S. Jackson for honorary membership, which has just come from the Bexar County Society.

Secretary Taylor: I am authorized by the Treasurer to present his report.

TREASURER'S REPORT

The facts and figures pertaining to the accounts of the Treasurer are reflected in the Auditor's report, which will be submitted by the Board of Trustees, and to which I refer.

There is cash in the treasury, as of April 29, 1940, in the sum of $16,893.27, which is on deposit with the Fort Worth National Bank of Fort Worth, Texas. In addition, the sum of $6,240.87 is on deposit with the First National Bank, Fort Worth, and $80.00 is held in the office of the State Secretary, for which latter two amounts the Secretary is responsible.

During the period from April 26, 1939, to April 29, 1940, cash was received from all sources in the aggregate amount of $70,739.03. Disbursements from the Treasurer's account to the Association Operating, or Secretary's account, totaled $72,716.97. The balance on deposit in the Treasurer's account at the beginning of the period was $18,871.21, and at the end of the period (as stated above) $16,893.27.

The investments as of April 29, 1940, consist of the following: 114 shares of American Telephone and Telegraph Company common stock, costing $14,489.71; 86 shares of Anaconda Copper Mining Company common stock, costing $5,348.75; bonds of Home Owners Loan Corporation, face value $13,600.00; first lien collateral trust bonds of the Terrace Development Company, Houston, in the face amount of $5,000.00; first mortgage loans aggregating $27,000.00; and other secured loans, $5,000.00.

The following changes were effected in the investments during the year:

Additions:		
Secured loan to Lawton Deats and Durwood Anderson, Houston, Texas		$10,000.00
Reductions:		
Collection of Retail Merchants Loan Co. Note	$5,000.00	
Collections of principal of Terrace Development Company bonds	1,500.00	6,500.00
Net Increase in investments		$ 3,500.00

During the year interest and dividends in the aggregate amount of $3,329.00 were received on the above securities.

Respectfully submitted,

K. H. BEALL, Treasurer,

We certify that the above is correct as disclosed by audit.

McCAMMON, MORRIS & PICKENS,
By H. A. PICKENS,
Certified Public Accountants.

The report of the treasurer was referred to the Reference Committee on Finance.

Dr. John T Moore, chairman of the Board of Trustees, then presented the report of the Board of Trustees, as follows:

REPORT OF BOARD OF TRUSTEES

In addition to the facts, figures and conclusions of the Auditor's report, which we submit herewith, there are a few items of special interest upon which we desire to comment at the outset.

Councilors' Expenses.—We have continued to pay the traveling expenses of councilors, under the terms of instructions from this House of Delegates. We find it a bit difficult to make comparisons of this expenditure as between succeeding years. There is no requirement as to when expense accounts should be filed and, consequently, paid. We have adopted the policy of compiling this expense for each fiscal year, rather than for the season of greatest activity. During the past fiscal year, 1938-39, councilors' expense accounts paid totaled $384.19. The same accounts for the previous year totaled $440.47. However, some expense accounts have been received since the close of the fiscal year. It begins to appear that councilors' expenses will run on an average of between $400.00 and $500.00 per year. As we have said before, where this money is spent in actual travel and activities of councilors within their districts, pursuant to their responsibilities, it is money well spent. The importance of this group of officials, and of this activity in the year's work, can hardly be overestimated. With an active Board of Councilors, and an active list of county society secretaries, there should be no question of successful operation of our potentially great organization.

Membership.—It may be considered that other officials and groups are exclusively interested in the matter of membership. Not so. A large part of the income of the Association comes from membership dues. It is the obligation of the Board of Trustees of the Association to see that the Association has the maximum income under any given condition. Therefore our interest in this problem for lo these many years. For that reason we have been interested in the activities of our Board of Councilors, even though we have no jurisdiction over them. We are happy to note from the report of the State Secretary that there is a continued and steady increase in membership. We believe the increase is due to the increase in medical population of the state and, perhaps more definitely so, to the activities of county society secretaries and the councilors. While quite probably we have not reached the saturation point in our membership, considering the whole medical population of the state, we are probably not far from a safe margin. We are anxious about the matter of membership for more reasons than merely the money involved. We have been repeatedly told, and every effort has been made to impress us with the fact that the medical profession throughout the country is likely to be called upon to serve in a quasi official capacity in the distribution of medical service. If we are to function in any way as administrators of this important service, we must be solidly and properly organized and ready for the task.

It seems that our membership for the past year, 1939 (the calendar year), was 4,348. Of this number, 4,218 paid full dues, 35 paid intern dues, which is $4.00, and 95 were honorary members and hence paid no dues. This is an increase over the previous year, when the total membership was 4,199, with about the same proportion of non or restricted payment members. Already this year dues have been paid for 4,062 members, at the regular rate, and for 36 at the intern membership rate, with 82 honorary members reported. That makes a total of 4,180 members so far. We give these figures at the risk of repetition, in order to call the attention of this House of Delegates to the importance of bringing into the organization every reputable, ethical practitioner of medicine in this state who is eligible to membership, not alone that he may be benefited but that he may contribute his share to the great work this Association is doing and trying to do.

The Annual Session Last Year, at San Antonio, cost exactly $5,997.02. The income from our technical exhibits amounted to $3,375.00. That cut the cost to us to $2,622.02. These figures are called to the attention of this House because they point to two important considerations in this connection. First, every effort is made to put on a good show, with all of its ramifications. Second, our friends and supporters who exhibit with us actually defray more than half the cost of the show. Without this income we would, indeed, be put to it to provide the program and the facilities for its proper presentation.

We continue, of course, to defray the actual expenses of our invited guests. This item amounted to $1,278.75 at the San Antonio meeting. That was somewhat in excess of the cost of invited guests at the Galveston meeting, which was $1,156.30. It may be of interest to know that checks to cover the expenses of invited guests this year, have totaled $987.40. There will be a few charges against this account before we are through with it, but the group this year unquestionably will cost less than the group for last year.

The entertainment item of the expenses of our annual session has all along been a variable matter, although not greatly so. Entertainment, like everything else, has increased in cost if not in value. For instance, luncheons that were available last year at 75 cents (although grudgingly so), have definitely advanced to $1.00 this year. The only items of expense approved by the Board of Trustees, and for which the Association is itself responsible, are a luncheon given for our women visitors (very largely the Woman's Auxiliary), and the music and punch for the President's Reception and Ball. Last year, $378.00 was paid for the luncheon for the women visitors, while the President's Reception and Ball cost $297.00.

Of course, the principal entertainment feature is sponsored by our host society. We have endeavored in every way possible and at the same time courteous and appreciative, to bring about a reduction in the scope and expense of this part of the entertainment, but with unfailing failure. Whether we should do anything more definite about the entertainment furnished by the Association, or the entertaining society, is hardly for us to say. We can merely point to the situation as it is.

In Support of the Medical Practice Act.—During the past year the Board of Trustees was called upon to defend the citizenship requirement of our recently amended Medical Practice Act. It will be recalled that one of the amendments to the Act requires citizenship as a prerequisite for the privilege of practicing medicine in Texas, whether by reciprocity, examination, or what have you. This feature of the law was attacked on the ground, among others, that the provision was in violation of the Fourteenth Amendment of the Federal constitution. Under that amendment an alien is extended the same rights that a citizen has, in the matter of making a living. It was the contention of our State Board of Medical Examiners, in which we thoroughly agreed, that

the practice of medicine is not a right but a privilege, and as such exercised upon terms properly set up by the state, the practice of medicine being reserved to the police powers of the state. Acting upon the advice of our Executive Council, and with the consent of our Council on Medical Defense, the Board of Trustees authorized our General Attorney to join the Attorney General of the state, as co-counsel, in resisting this suit. The cost of the litigation was considerable, but, as an actual fact, it is much below what might have well been expected. A less important and less exacting case, involving the rights of certain individuals to practice medicine in another state, cost the state medical association of that state more than $12,000.00. The total cost of our case, the so-called "Manual Garcia-Godoy vs. State Board of Medical Examiners" case, cost our Association $2,772.69. Not having budgeted to cover any such emergency as this, we have had to take this money from our reserve. Through the consent of our Council on Medical Defense, the money was taken from the reserve of the Medical Defense Fund. It has been agreed between us that if and when this fund needs this money for the defense of medical malpractice suits, the amount involved will be returned to the fund. In rallying to the support of the State Board of Medical Examiners in this particular case, which we knew would be expensive, we felt that it was a matter of direct interest to the medical profession of Texas, individually and collectively, not to mention the welfare of the state, which, after all, is the ultimate desideratum, to sustain the citizenship requirement of the Medical Practice Act. We think our justification lies in the certainty of what would have happened had we not entered the case. It would seem rather foolish for us to spend money and devote much time in securing the enactment of laws which will benefit the practice of medicine and the public health and then not do anything about sustaining them when they are attacked in the courts. This is another illustration of the flexibility, under proper control, of the machinery set up for the conduct and management of the affairs of this Association.

Library.—The demands for library service during the past year have shown a sharp increase, which, however, has been met by the regular staff without any additional help. A new assistant librarian was employed September 1, 1939, to fill a vacancy created by a change in the personnel of the JOURNAL office. The new employee is a graduate in library science from the North Texas State Teachers College at Denton. The administrative features of the library are being steadily improved.

The increased demand for library service during the past year was due almost entirely to the great interest in the subject of so-called "socialized medicine," which was the debate topic selected for high school students by the Texas Interscholastic League. As a result of the selection of this topic, requests have been received from all sections of the state for library packages on the subject. This demand was foreseen, due to the fact that the author of the debate manual to be used by high school students had used the Library as a source of material in the preparation of the manual. Fifty packages were prepared, containing the following fifteen items, for the use of high school debaters, who were permitted to keep them for one week:

1. Care of the Indigent Sick.[1]
2. Compulsory Health Insurance and Disease Control.[2]
3. Coöperatives and Medical Service.[1]
4. A Critical Analysis of Sickness Insurance.[1]
5. Factual Data on Medical Economics.[1]
6. Handbook of Sickness Insurance, State Medicine and the Cost of Medical Care.[1]
7. Health Insurance in England.[1]
8. Looking at Health Insurance Abroad.[3]
9. Medical Care in the United States, Demand and Supply.[1]
10. On the Witness Stand.[2]
11. Organized Payments for Medical Service.[1]
12. Rural Medical Service.[1]
13. Sickness Insurance Catechism.[1]
14. Sickness Insurance in Europe.[3]
15. Some Defects in Insurance Propaganda.[1]

These packages, together with other specially prepared packages on the subject, have been used by doctors, teachers, club women, college students, debate coaches and high school students, being shuttled back and forth at a rapid rate, so that every demand for such service has been met. The only requirement made of lay individuals, in addition to the regulations governing library service, was that endorsement by a physician was required. The necessity for this requirement is manifest, as these were loan packages. We are happy to say that practically no difficulties have been met with in securing the return of this material, and the users have been extravagant in their praise of the service and in their appreciation for it.

During 1939, a total of ninety-eight packages on socialized medicine were mailed out, and from January 1 to April 24, 1940, 149 packages were mailed, making a total of 247 on this subject alone. Many of these packages have singly served large groups of students, so it is not possible to know the total number thus served. Many debaters have stated that the material helped them to win their debates against socialized medicine.

The accompanying tables, all of which are self-explanatory, reveal the increased use of the library, and its growth for the last several years. It will be noted that a total of 105,970 reprints is now on file in the library. Actually, there are only about 100,000, as we have reached the point where we are discarding old reprints to make room for new. The 100,000 level will be maintained until it is evident that a larger number is needed in the package service. It is likely that this is the largest number of reprints in the world, classified and filed by subject, with the exception of the number in the Library of the American Medical Association.

The library contains a large number of old volumes of a great variety, some of which are duplications, that it must dispose of to make room for other material. Many of the volumes are of value. Any of them will be shipped, on request, to any library or member of our Association desiring them, at the expense of the receiver. The books are stored in the library in Fort Worth, and will for a time be subject to inspection by any who may be interested.

The library was the recipient of only one historical item during the past year, but it was highly appreciated. It is a picture, donated by Dr. C. M. Grigsby of Dallas, of the members attending the twenty-eight annual session of the State Medical Association, at Fort Worth, in 1896. An effort has been made to identify all in the group.

[1]Bureau of Medical Economics, American Medical Association, Chicago.
[2]Public Relations Bureau, Medical Society of the State of New York, New York City.
[3]J. George Crownhart, Secretary, State Medical Society of Wisconsin, Madison, reprinted from the Proceedings of the Annual Congress on Medical Education and Licensure, Chicago, February 13 and 14, 1939.

TABLE 1.—*Showing number of packages mailed from the Library of the Association, each year, by month.*

	1932	1933	1934	1935	1936	1937	1938	1939
January	10	16	37	54	54	55	60	56
February	8	23	61	50	57	38	56	58
March	7	51	58	54	55	70	56	55
April	5	47	55	49	60	61	52	61
May	14	25	51	47	41	60	48	58
June	7	27	32	32	51	35	25	60
July	8	9	34	31	19	27	32	46
August	11	15	31	43	46	27	34	41
September	6	19	46	37	43	58	58	57
October	11	17	57	56	50	49	71	71
November	15	24	44	54	52	43	49	61
December	9	34	24	40	43	57	43	81
Totals	111	305	530	547	561	580	584	705

Others who may have such pictures or other historical items or documents, are urged to contribute them to the library, that they may be preserved and enhance the traditional values of the Association's museum.

The following physicians donated reprints, back copies of journals and current books, to the library during the past year: Drs. L. O. Godley, S. J. R. Murchison, Will S. Horn, R. H. Needham, all of Fort Worth.

The Trustees welcome the appointment of a special Library Endowment Committee, which, it is hoped, will stimulate the creation of funds in perpetuity, that will insure the building of a great medical library service for the physicians and the public of Texas. No doubt there are members of the Association and laymen who, if this opportunity for making their surplus means serve a worthy cause is brought to their attention, will establish such funds, to be named after themselves or their loved ones. The Trustees will gladly help this committee in any way that they can.

TABLE 2.—*Comparison of growth of the Library, volumes, periodicals, and reprints during the past five years.*

	1935	1936	1937	1938	1939
Volumes	4,033	4,125	4,232	4,302	4,407
Periodicals	150	155	155	156	171
Exchange	88	90	94	96	98
Subscription	45	47	47	44	46
Gift	4	6	6	4	12
Miscellaneous	9	11	12	12	15
Reprints	54,540	65,700	79,224	92,160	105,970

TABLE 3.—*Comparative data on use of Library during the past five years.*

	'35-'36	'36-'37	'37-'38	'38-'39	'39-'40
Local users	519	458	453	405	447
Borrowers by mail	471	521	548	499	862
Items consulted	2,289	1,820	1,358	1,508	1,530
Items taken out	1,868	1,474	1,624	1,523	2,003
Items mailed out	5,461	5,577	6,701	5,934	10,154
Total items loaned	7,329	7,051	8,325	7,457	12,157

The Auditor's Report is submitted herewith. This report constitutes a full account of the finances of the Association, set up in accordance with the usual rules governing such matters. To any not entirely familiar with the technicalities of accounting, this report will need to be studied rather carefully if it is to be informative. We very much desire that it be informative, therefore request our members to study the same. Our State Secretary will be glad to explain any points which may not be clear to any member.

We would first call attention to the reference in the Auditor's report to our investment account, and our so-called surplus. We think there can be no doubt but that our money is invested in securities as nearly the desideratum as would be possible. In other words, gilt-edge securities usually pay so little interest that they are not profitable except in handling very large sums of money, and investments which pay large returns are usually not safe. We have tried to strike a fairly safe middle ground. It would seem that we have done very well in that particular.

Again we would call attention to the fact that our so-called surplus is not a surplus, but a fairly competent working balance. It is a satisfactory working balance, for the reason that it is sufficiently large to carry on in the face of necessary loss in operation, for a period of time sufficient to permit recovery. A surplus less than that is not satisfactory as a working balance. An instance of the safety factor involved in this setup is the unexpected necessity of contributing more than $2,500.00 to the defense in the courts of a very important phase of our Medical Practice Act. Without a reserve there would have been considerable hesitation in assuming the financial burden involved, and if assumed, the books of the Association would not be in the red. In this connection, and it is an important matter, the income from the investment of our surplus must be considered. It will be noted that we have budgeted for the next year a total expenditure of $58,550.00. It will take that much, we figure, to take care of our normal activities. Of this sum, $3,300.00 will come from interest on our investments. That amount is purely a pick-up. Any going concern must have a working balance as a background. When that balance can be made to pay fairly good interest, something has been salvaged.

In 1911, at the time the present chairman of the Board assumed office, the Association had a surplus of $9,787.72. The Association was spending a little better than $10,000.00 per year at that time. The income from members in 1911 was $2,920.80. The income from advertising was $4,628.94. Interest on our deposit in the bank was $400.00. The membership was 2,992, and the dues were $2.00. The Board of Trustees at that time adopted the policy of gradually building up the so-called surplus of the Association until it amounted to $100,000.00. This objective has not yet been reached, but it is in sight. The total assets at the moment figure $109,755.59. That, of course, includes money on hand, money invested, and assets of any character. It does not represent our surplus, or even our working capital, for the reason that the amount will be gradually reduced by the difference between receipts and expenditures, month by month, until it falls well below $75,000.00. In short, and not to involve this report in too many figures, our working balance is large enough to make us feel safe, is satisfactorily invested, and is accumulating at such a slow rate that it will not prove a burden on any member of the Association or upon any activity thereof. Indeed, it has never done so at such a rate as to do any of that.

Attention is invited particularly to the budget for the current year, which is so set up as to show the actual income and expense, in comparison with the estimated income and expense. This table will perhaps enable the novice to grasp the situation better than in any other way. The Association Fund, so-called because it carries a variety of accounts not particularly related one to the other, shows a neat balance of $1,962.70. It was expected that the income for this fund would amount to $19,000.00, whereas it actually amounted to $19,864.10. In the meantime, the expense was, instead of $19,000.00, $17,901.40. This is the one fund that the Central Office can do anything about. It is easier here to accomplish economies than in any of the other funds.

The Journal Fund apparently lost $438.96. This is a paper loss rather than actual. For instance, reference to the analysis of expense will show charged to this fund a depreciation on the building, furniture and fixtures, to nearly twice that amount. Of course, we still have the building, and furniture and fixtures. This is true, naturally, of every fund, but it is of moment here because of the policy of the Trustees of publishing a worth while journal even if there must be a loss, the only restriction being that the loss shall not be excessive. And we would again point to the probability that by a little effort on the part of each of our members, in support of the advertising business in the JOURNAL, the income from that source could be greatly increased, so much, in fact, as to warrant a publication perhaps one-half again as large as at present. We feel that the JOURNAL as it stands is approximately about such a publication as should be issued by an organization of the size and strength of ours, but it could be easily enlarged if we had the money to pay the additional cost. Our editors are constantly embarrassed by the necessity of refusing publication to splendid articles submitted for publication. At that, it is our feeling that our publication ranks with the best of its class in the country.

The Medical Defense Fund, not taking into account the already mentioned fee for legal services which was taken out of the reserve of that fund, shows a balance of $191.12, which is its normal condition.

The Public Relations Fund shows a deficit of $153.58. It was expected that this fund would suffer in this respect when it was set up. It so happened that extra expenditures were expected for the Association Fund, and no extra expenditures expected for the Public Relations Fund. The anticipated needs in connection with the Association Fund were not realized.

The item of library expense may be significant at this time. It will be found under "Analysis of Expense.". The total cost of the library last year was $3,706.23. That is in the neighborhood of $1.00 per member. It is well worth it, but that amount could be devoted to other purposes admirably, and will be so devoted if and when a sizeable endowment is accumulated for the support of the library, as per plans now being matured by the Board of Trustees, and concerning which an announcement may be made at this meeting.

The net income for the year was $1,561.28, which is not at all bad under the circumstances. That is a saving of something like thirty-five cents per member.

We would have our county society secretaries, particularly, check the list of membership for the years 1939 and 1940, to see that it balances with their books, respectively. This includes Emeritus, Honorary, and Interne, as well as the Regular membership.

The budget for the forthcoming fiscal year is set up in the auditor's report, and the Trustees would have this House of Delegates approve or criticize the same.

AUDITOR'S REPORT

May 4, 1940.

The Board of Trustees,
State Medical Association of Texas,
Fort Worth, Texas.
Gentlemen:

Pursuant to engagement we have audited the books of account of the State Medical Association of Texas for the period from April 26, 1939, to April 29, 1940, and submit herein our report containing the following statements and schedules:

Statement of Assets and Surplus as of April 29, 1940.
Investments.
Analysis of Surplus.
Condensed Summary of Income and Expense.
Income and Expense—Detailed (including comparison with budget).
Analysis of Expenses.
County Society Membership.
Proposed Budget for the year 1940-1941.

SCOPE OF AUDIT

Our examination embraced similar procedure to that followed in our previous audits of your Association. All receipts issued to Secretaries of County Societies for dues paid were compared with the cash receipts record, and the total of dues received was balanced against the membership roll. All receipts issued for payment of advertising accounts, income from investments, etc., were checked in detail against the cash receipts record. All recorded cash received was traced into the depositories.

Checks paid by the depository banks during the period reviewed were inspected, compared with the corresponding entries in the disbursements record, and the recorded totals proved by addition. Disbursements were further substantiated by examination of paid invoices.

Cash on hand was verified by actual count; and cash on deposit by reconcilement with bank statements and by direct correspondence with the depositories.

Postings to the general ledger for the entire period were checked against the books of original entry, and other tests were made of the correctness of your general records.

Income from journal advertising was verified by detailed check of the advertising appearing in all issues for the year against the charges to the advertisers' accounts.

Further verification of the assets of the Association is indicated in the following comments.

ASSETS AND SURPLUS

Cash on Hand and on Deposit, $23,214.14, was verified by count and by correspondence, as stated hereinbefore.

Investments were verified by correspondence with the State National Bank of Houston with respect to the Freeman, Culmore, and Deats and Anderson notes held for collection by said bank, and by inspection of the remainder of the notes, bonds and stock certificates held in the Treasurer's safety deposit box at the Fort Worth National Bank. The investments are described in an accompanying schedule, and are classified in the balance sheet as follows:

First Mortgage Loans	$27,000.00
Other Secured Loans	5,000.00
Stocks and Bonds	38,438.46
	$70,438.46

Changes in the "Investments" account during the year reviewed were as follows:

Additions:		
Lawton Deats and Durwood Anderson loan secured by First Mortgage on Houston, Texas Real Estate		$10,000.00
Reductions:		
Collection of loan to Retail Merchants Loan Co.	$ 5,000.00	
Collection of principal of Terrace Development Co. bonds	1,500.00	6,500.00
Net increase in investments		$ 3,500.00

Accounts Receivable, consisting of unpaid charges for advertising and professional cards in the Journal of the Association in the aggregate amount of $1,657.42, and credits for prepaid advertising in the sum of $666.50, were substantiated by trial balance of the subsidiary ledger. The collectibility of the accounts was discussed with your Secretary, after which items totaling $61.00 were charged off.

Fixed Assets, $15,254.07, are classified as follows:

Office Building (including land, $3,000.00)		$13,874.51
Furniture and Fixtures:		
Balance — April 26, 1939	$11,995.13	
Additions—Net	366.39	12,361.52
		$26,236.03
Less: Reserve for Depreciation:		
On Building	$ 2,109.80	
On Furniture and Fixtures	8,872.16	10,981.96
Cost less depreciation		$15,254.07

Surplus. You will note in the accompanying Analysis of Surplus that an item captioned "Enforcement —Medical Practice Case," $2,772.69, has been charged direct to the surplus of the Medical Defense Fund. Said item represented legal and related costs to the State Medical Association of Texas in defending the case of Manuel Garcia-Godoy vs. the State Board of Medical Examiners, in the District Court of Travis County, Texas, which was a test case involving the citizenship requirements of the recently amended Medical Practice Act. The Council on Medical Defense agreed to permit the charge for said expense to be made against its Surplus account, with the understanding that reimbursement thereto should be made in the event of future depletion of said Surplus account below its requirements.

OPERATIONS

Income from all sources was received by the Association in the amount of $58,857.91, and expenses of $57,296.63 were incurred, resulting in a net income of $1,561.28.

Your attention is directed to the several schedules included herein which relate to your operations, particularly that of "Income and Expense" which sets forth a classified comparison of actual income and expense for the year with the budget adopted for the year under review.

Dues for the year reviewed were paid by 4,252 members of the Association which, together with 95 honorary members, resulted in a total membership of 4,347, as compared with 4,199 for the preceding year. The paid membership included 35 internes who were assessed annual dues of $4.00 each instead of the regular dues of $9.00, in accordance with action taken at the Annual Meeting in 1938.

GENERAL

Fidelity bonds are carried on officers and employees of the Association as follows:

Dr. Holman Taylor, Secretary and Editor	$ 5,000.00
Dr. R. B. Anderson, Assistant Secretary-Editor	5,000.00
Dr. K. H. Beall, Treasurer	15,000.00
Miss Anna Keith, Bookkeeper	5,000.00

A proposed budget for the forthcoming fiscal year is submitted herein for your consideration.

CONCLUSION

Our examination reflected that all recorded cash receipts were satisfactorily accounted for, and that the financial affairs of the Association were properly administered during the year audited.

We hereby certify that the accompanying statements, as disclosed by records examined, in our opinion correctly reflect the financial condition of the State Medical Association of Texas as of April 29, 1940, and the result of operations for the fiscal year ended at that date.

Yours very truly,
McCammon, Morris & Pickens,
By H. A. Pickens,
Certified Public Accountant.

STATEMENT OF ASSETS AND SURPLUS

As at April 29, 1940

ASSETS

Cash on Hand and Deposit		
On Hand—Secretary's Office	$ 80.00	
On Deposit—Secretary's Account	6,240.87	
On Deposit—Treasurer's Account	16,893.27	$ 23,214.14
Investments		
First Mortgage Loans	$ 27,000.00	
Other Secured Loans	5,000.00	
Stocks and Bonds—Cost	38,438.46	70,438.46
Other Assets		
Notes Receivable	$ 50.00	
Accounts Receivable—For Journal Advertising	1,657.42	
Less: Credits for Prepaid Advertising	—666.50	
	$ 1,040.92	
Less: Reserve for Bad Accounts	200.00	840.92
Fixed Assets		
Real Estate—Land	$ 3,000.00	
Office Building	10,874.51	
Furniture and Fixtures	12,361.52	
Total	$ 26,236.03	
Less: Reserve for Depreciation	10,981.96	15,254.07
Deferred Expense		
Utility Deposits		8.00
Total Assets		$109,755.59

RESERVES AND SURPLUS

Reserves		
Unearned Dues:		
Association Fund	$ 15,844.00	
Journal Fund	11,991.00	
Medical Defense Fund	3,997.00	
Public Relations Fund	3,961.00	
Unearned Journal Subscriptions—Non-Members	46.30	
Commercial Exhibits—Annual Meeting	1,868.19	
Social Security Taxes	22.27	
Total Reserves		$ 37,729.76
Surplus		
Association Fund	$ 13,742.99	
Journal Fund	5,333.82	
Medical Defense Fund	21,512.04	
Public Relations Fund	6,364.04	
Unappropriated Surplus	25,072.94	
Total Surplus		72,025.83
Total Reserves and Surplus		$109,755.59

INVESTMENTS

As at April 29, 1940

	Amount of Investment	Income 4-26-39 to 4-29-40
Real Estate First Mortgage Loans		
John H. Freeman Notes		
Dated 5-15-37; due 5-15-42	$ 3,500.00	
Dated 5-15-37; due 5-15-42	3,500.00	
Interest at 5% per annum — Payable semi-annually		$ 350.00
Secured by first lien on property in Houston, Texas.		
March Culmore Notes		
10 Notes of $1,000.00 each Dated 6-6-37; due 6-6-42	10,000.00	
Interest at 5% per annum payable semi-annually		500.00

Secured by first lien on property in Houston, Texas.		
Lawton Deats and Durwood Anderson Notes		
Dated 8-24-39; due $2,000.00 per year, 8-24-40 to 8-24-44	10,000.00	
Interest at 5½% per annum payable semi-annually		275.00
Secured by first lien on property in Houston, Texas.		
Total First Mortgage Loans	$27,000.00	$ 1,125.00
Commercial Loans		
Wm. R. Thompson, Jr., Trustee		
Dated 5 15-37; due 5-15-38	$ 5,000.00	
Interest at 5% per annum		$ 250.00
Secured by: 50 shares Retail Merchants Loan Stock 25 shares Alvord National Bank Stock		
Retail Merchants Loan Co.		
$5,000.00 note due 7-30-39 and paid		
Interest at 4% per annum		100.00
Total Commercial Loans	$ 5,000.00	$ 350.00
Stocks Owned		
Anaconda Copper Co.:		
86 shares costing	$ 5,348.75	$ 107.50
Par Value $50.00 per share		
American Telephone & Telegraph Co.:		
114 shares—common—costing	14,489.71	1,026.00
Par Value $100.00 per share		
Total Stocks Owned	$19,838.46	$ 1,133.50
Bonds Owned		
Home Owners Loan Corporation:		
Series A 3% Bonds—par	$13,600.00	$ 408.00
Terrace Development Co., Houston:		
First Lien Collateral Trust 5% Bonds		
10 at $500.00 each	5,000.00	312.50
Final maturity 12-1-41		
Security—Pledge of First Liens on newly improved Houston, Texas, real estate		
Total Bonds Owned	$18,600.00	$ 720.50
Total Stocks and Bonds	$38,438.46	$ 1,854.00
Total Investments	$70,438.46	$ 3,329.00

ANALYSIS OF SURPLUS

April 29, 1940

Association Fund			
Surplus—April 26, 1939		$11,772.29	
Additional 1938 Dues Collected		8.00	
Revenue—Current Year	$19,864.10		
Expense—Current Year	17,901.40	1,962.70	
Surplus—April 29, 1940			$13,742.99
Journal Fund			
Surplus—April 26, 1939		$ 5,666.78	
Additional 1938 Dues Collected		6.00	
Bad Debts Collected—Journal Advertising		100.00	
Revenue—Current Year	$30,524.81		
Expense—Current Year	30,963.77	—438.96	
Surplus—April 29, 1940			5,333.82
Medical Defense Fund			
Surplus—April 26, 1939		$24,091.61	
Additional 1938 Dues Collected		2.00	
Revenue—Current Year	$ 4,252.00		
Expense—Current Year	4,060.88	191.12	
Enforcement—Medical Practice Case		—2,772.69	
Surplus—April 29, 1940			21,512.04
Public Relations Fund			
Surplus—April 26, 1939		$ 6,515.62	
Additional 1938 Dues Collected		2.00	
Revenue—Current Year	$ 4,217.00		
Expense—Current Year	4,370.58	—153.58	
Surplus—April 29, 1940			6,364.04
Special Appropriations Fund (No transactions from April 26, 1939, to April 29, 1940)			
Surplus—April 29, 1940			25,072.94
Total Surplus—April 29, 1940			$72,025.83

CONDENSED SUMMARY OF INCOME AND EXPENSE

April 26, 1939 to April 29, 1940

Income		
Association Fund	$19,864.10	
Journal Fund	30,524.81	
Medical Defense Fund	4,252.00	
Public Relations Fund	4,217.00	
Total Income		$58,857.91
Expense		
Association Fund	$17,901.40	
Journal Fund	30,963.77	
Medical Defense Fund	4,060.88	
Public Relations Fund	4,370.58	
Total Expense		57,296.63
Total Net Income		$ 1,561.28
Net Income or Deficit by Funds:		
Association Fund	$ 1,962.70	
Journal Fund	—438.96	
Medical Defense Fund	191.12	
Public Relations Fund	—153.58	
Total Net Income	$ 1,561.28	

INCOME AND EXPENSE

April 26, 1939 to April 29, 1940

	Actual	Budget	Over	Under
Association Fund				
Income:				
Membership Dues	$16,868.00	$16,400.00	$ 468.00	$
Interest and Dividends	2,996.10	2,600.00	396.10	
	$19,864.10	$19,000.00	$ 864.10	$
Expense:				
Annual Meeting	$ 2,622.02	$ 4,000.00	$	$ 1,377.98
Officer's Expense	1,110.63	1,000.00	110.63	
Salaries	7,315.10	7,700.00		384.90
Administration	2,947.42	2,500.00	447.42	
Library	3,706.23	3,500.00	206.23	
Other	200.00	300.00		100.00
	$17,901.40	$19,000.00	$	$ 1,098.60
Net Income—Association Fund	$ 1,962.70		$ 1,962.70	
Journal Fund				
Income:				
Membership Dues	$12,756.00	$12,300.00	$ 456.00	$
Non-Membership Subscriptions	105.82		105.82	
Sale of Journals	23.51		23.51	
Advertising	17,306.58	16,500.00	806.58	
Interest and Dividends	332.90		332.90	
	$30,524.81	$28,800.00	$ 1,724.81	$
Expense:				
Printing and Distribution	$17,197.03	$16,500.00	$ 697.03	$
Salaries	11,109.90	11,000.00	109.90	
Administration	2,656.84	1,300.00	1,356.84	
	$30,963.77	$28,800.00	$ 2,163.77	$
Net Income—Journal Fund	$ —438.96			$ 438.96
Medical Defense Fund				
Income:				
Membership Dues	$ 4,252.00	$ 4,100.00	$ 152.00	$
	$ 4,252.00	$ 4,100.00	$ 152.00	$
Expense:				
Attorney Fees	$ 3,042.72	$ 3,000.00	$ 42.72	$
Salaries	960.00	480.00	480.00	
Administration	58.16	620.00		561.84
	$ 4,060.88	$ 4,100.00	$	$ 39.12
Net Income—Medical Defense Fund	$ 191.12		$ 191.12	
Public Relations Fund				
Income:				
Membership Dues	$ 4,217.00	$ 4,100.00	$ 117.00	$
	$ 4,217.00	$ 4,100.00	$ 117.00	$

Expense:				
Legislative	$ 315.08	$ 160.00	$ 155.08	$
Salaries	3,840.00	3,840.00		
Administration	215.50	100.00	115.50	
	$ 4,370.58	$ 4,100.00	$ 270.58	$
Net Income—Public Relations Fund	$ —153.58			$ 153.58
Total Net Income	$ 1,561.28			

ANALYSIS OF EXPENSE
April 26, 1939 to April 29, 1940

ASSOCIATION FUND

Annual Meeting Expense		
Meeting Places—Section and General	$ 96.00	
Guests' Expense	1,278.75	
Entertainment	675.00	
Convention Literature and Badges	684.99	
General and Staff Expense	1,117.44	
Scientific Exhibits	611.00	
Technical Exhibits	1,533.84	
	$ 5,997.02	
Less: Income, Commercial Exhibits	3,375.00	$ 2,622.02
Officers' Expense		
Traveling, etc		$ 1,110.63
Salaries		
Secretary	$ 3,460.04	
Assistant Secretary	840.00	
Bookkeeper and Stenographers	3,015.06	7,315.10
Administration		
Journal Space	$ 336.00	
Printing and Stationery	168.05	
Postage	271.50	
Telephone and Telegraph	181.60	
Office Supplies and General	188.82	
Binding	27.00	
Heat	77.21	
Light and Water	99.02	
Janitor's Salary and Supplies	232.55	
Maintenance and Repair	153.94	
Depreciation—Building	271.86	
Depreciation—Furniture and Fixtures	439.24	
Taxes—Property	9.37	
Taxes—Social Security	307.92	
Audit, Bonds and Insurance	181.41	
Insurance on Real Estate	1.93	2,947.42
Library Expense		
Salaries	$ 2,400.00	
Janitor Service	132.00	
Telephone and Telegraph	72.05	
Utilities	176.56	
Supplies	143.05	
Postage and Express	73.79	
Books and Publications	541.71	
Binding	125.87	
Audit and Insurance	28.04	
Miscellaneous	13.16	$ 3,706.23
Other Expense		
Collection and Preservation of Records		200.00
Total Expense—Association Fund		$17,901.40

JOURNAL FUND

Cost of Printing and Distribution		
Printing	$14,706.49	
Engraving	887.44	
Mailing and Delivery	533.00	
Commissions on Advertising	617.32	
Discounts on Advertising	452.78	$17,197.03
Salaries		
Assistant Editor (Assistant Secretary)	$ 4,160.00	
Editor (Secretary)	3,459.96	
Bookkeeper and Stenographers	3,489.94	11,109.90
Administration		
Bad Debts	$ 61.00	
Stationery and Printing	163.04	
Telephone and Telegraph	78.16	
Office Postage	267.00	
Office Supplies and General	224.48	
Heat	77.09	
Light and Water	98.89	
Janitor's Salary and Supplies	232.49	
Maintenance and Repairs	147.29	
Depreciation—Building	271.86	
Depreciation—Furniture and Fixtures	439.23	
Taxes—Property	9.36	
Taxes—Social Security	469.88	
Audit, Bonds and Insurance	115.15	
Insurance on Real Estate	1.92	$ 2,656.84
Total Expense—Journal Fund		$30,963.77

MEDICAL DEFENSE FUND

Attorney Fees		
Legal Service—Malpractice		$ 3,042.72
Salaries		
Secretary	$ 480.00	
Bookkeeper and Stenographers	480.00	960.00
Administration		
General	$ 20.21	
Taxes—Social Security	37.95	58.16
Total Expense—Medical Defense Fund		$ 4,060.88

PUBLIC RELATIONS FUND

Legislative Expense		
Traveling, etc.		$ 315.08
Salaries		
Secretary	$ 600.00	
Director	3,000.00	
Stenographer	240.00	3,840.00
Administration		
General Expense	$ 43.65	
Taxes—Social Security	163.10	
Audit	8.75	215.50
Total Expense—Public Relations Fund		$ 4,370.58

COUNTY SOCIETY MEMBERSHIP

County of	Membership for Year 1939 at 4-25-39	1939 at 4-29-40	1940 at 4-29-40
Anderson-Houston-Leon	33	34	36
Angelina	18	25	23
Atascosa	10	10	11
Austin-Waller	11	11	12
Bastrop	6	8	7
Baylor-Knox-Haskell	19	21	13
Bee-Live Oak-McMullen	11	12	10
Bell	48	66	63
Bexar	247	295	250
Bosque	9	9	10
Bowie	24	24	26
Brazoria	2	11	5
Brazos-Robertson	22	22	23
Brooks-Duvall-Jim Wells	17	19	16
Brown-Comanche-Mills-San Saba	27	29	31
Burleson	6	6	6
Caldwell	13	13	13
Cameron-Willacy	53	60	47
Camp	5	5	5
Cass-Marion	15	17	17
Cherokee	31	32	29
Childress-Collingsworth-Hall	19	22	22
Clay-Montague-Wise	18	22	20
Coleman	11.	11	11
Collin	17	21	17
Colorado	9	10	9
Comal	11	11	11
Cooke	13	13	16
Coryell	---	7	---
Crane-Upton-Reagan	6	6	6
Dallam-Hartley-Sherman-Moore	7	7	8
Dallas	459	486	502
Dawson-Lynn-Terry-Gaines-Yoakum	19	20	24
Delta	10	10	10
Denton	14	22	24
DeWitt	25	25	23
Donley-Armstrong	7	7	7
Eastland-Callahan	24	29	27
Ector-Midland-Martin-Howard-Andrews-Glasscock		33	28
Ellis	31	37	34
El Paso	98	124	113
Erath-Hood-Somervell	3	13	11
Falls	29	29	26
Fannin	12	13	22
Fayette	---	9	10
Fort Bend	9	10	9
Freestone	6	6	5
Galveston	69	77	77

County of	Membership for Year 1939 at 4-25-39	1940 at 4-29-40	1940 at 4-29-40
Gonzales	7	7	8
Grayson	38	39	42
Gray-Wheeler	26	26	24
Gregg	29	44	42
Grimes	8	8	8
Guadalupe	12	13	13
Hale-Floyd-Briscoe-Swisher	18	18	19
Hamilton	9	9	9
Hansford-Hemphill-Lipscomb-Roberts-Ochiltree	5	5	6
Hardeman-Cottle-Foard-Motley	18	20	13
Hardin-Tyler	10	12	12
Harris	434	458	424
Harrison	19	19	18
Hays-Blanco	7	13	12
Henderson	11	11	11
Hidalgo-Starr	41	49	51
Hill	22	22	16
Hopkins-Franklin	13	13	11
Hunt-Rockwall-Raines	45	48	42
Hutchinson-Carson	12	13	14
Jasper-Newton	10	10	10
Jefferson	108	124	117
Johnson	18	18	18
Karnes-Wilson	15	16	14
Kaufman	29	31	27
Kerr-Kendall-Gillespie-Bandera	27	28	27
Kimble-Mason-Menard-McCulloch	19	19	---
Kleberg-Kenedy	5	7	6
Lamar	29	29	29
Lamb-Bailey-Hockley-Cochran	12	15	11
Lampasas-Burnet-Llano	---	16	---
LaSalle-Frio-Dimmit	13	13	11
Lavaca	10	11	10
Lee	3	4	4
Liberty-Chambers	18	19	15
Limestone	7	9	8
Lubbock-Crosby	44	46	46
Matagorda	9	9	11
McLennan	78	86	80
Medina-Uvalde-Maverick-Val Verde-Edwards-Real-Kinney-Terrell-Zavala	32	37	32
Milam	10	14	---
Montgomery	2	9	---
Morris	5	6	6
Nacogdoches	14	14	15
Navarro	28	32	29
Nolan-Fisher-Mitchell	16	23	24
Nueces	77	78	80
Orange	5	5	5
Palo Pinto-Parker	25	26	24
Panola	---	---	8
Pecos-Presidio-Jeff Davis-Brewster	---	---	15
Polk-San Jacinto	12	12	12
Potter	55	57	62
Randall-Deaf Smith-Parmer-Castro-Oldham	9	12	12
Red River	7	7	6
Reeves-Ward-Winkler-Loving-Culberson	16	19	15
Runnels	9	10	9
Rusk	22	23	21
San Patricio-Aransas-Refugio	14	19	18
Scurry-Dickens-Kent-Garza-Borden-King-Stonewall	9	10	8
Shelby-San Augustine-Sabine	10	11	11
Smith	22	42	39
Stephens-Shackelford-Throckmorton	11	13	13
Tarrant	180	229	188
Taylor-Jones	36	59	53
Titus	9	10	8
Tom Green-Coke-Crockett-Concho-Irion-Sterling-Sutton-Schleicher	60	63	50
Travis	84	94	103
Trinity	---	---	---
Upshur	6	6	---
Van Zandt	10	11	9
Victoria-Calhoun-Goliad	16	16	19
Walker-Madison	25	25	25
Washington	16	16	15
Webb-Zapata-Jim Hogg	27	28	28
Wharton-Jackson	17	18	18
Wichita	51	68	71
Wilbarger	6	10	13
Williamson	23	23	20
Wood	11	11	10
Young-Jack-Archer	14	15	18
Total	3,792	4,347	4,076
Recapitulation:			
Regular Memberships	3,689	4,217	3,961
Internes Memberships	27	35	36
Honorary and Emeritus	76	95	79
	3,792	4,347	4,076

PROPOSED BUDGET FOR FISCAL YEAR 1940-1941
BASED ON $9.00 DUES
BUDGET APPROPRIATION

	Income	Expense
Association Fund		
From Dues ($4.00 per member)	$17,000.00	
From Interest and Dividends	3,000.00	
To be applied to:		
Annual Meeting Expense		$ 3,500.00
Officers' Expense		1,500.00
Salaries		7,500.00
Administration		3,000.00
Library		4,000.00
Other Expense		500.00
	$20,000.00	$20,000.00
Journal Fund		
From Dues ($3.00 per member)	$12,750.00	
From Interest and Dividends	300.00	
From Journal Advertising	17,000.00	
To be applied to:		
Cost of Printing and Distribution		$17,000.00
Salaries		11,000.00
Administration		2,050.00
	$30,050.00	$30,050.00
Medical Defense Fund		
From Dues ($1.00 per member)	$ 4,250.00	
To be applied to:		
Attorney Fees, etc.		$ 3,000.00
Salaries		1,000.00
Administration		250.00
	$ 4,250.00	$ 4,250.00
Public Relations Fund		
From Dues ($1.00 per member)	$ 4,250.00	
To be applied to:		
Legislative Expense		$ 200.00
Salaries		3,840.00
Administration		210.00
	$ 4,250.00	$ 4,250.00
Total Estimated Income and Proposed Application	$58,550.00	$58,550.00
Estimated Income:		
Dues—4,250 Members	$38,250.00	
Journal Advertising	17,000.00	
Interest and Dividends	3,300.00	
	$58,550.00	

Finally, we would acknowledge the encouraging support of our membership, from the President to the humblest private in the ranks, and the very fine work, loyalty and devotion of the staff of the Central Office.

Respectfully submitted,
JOHN T. MOORE, Chairman,
W. R. THOMPSON,
J. B. MCKNIGHT,
S. E. THOMPSON,
W. B. RUSS.

The report of the Board of Trustees was then referred to the Reference Committee on Finance, with the exception of that part of the report dealing with the library, which part was referred to the Reference Committee on Scientific Work.

Dr C. E. Scull, of San Antonio, then presented the report of the Board of Councilors, as follows:

FIRST REPORT OF BOARD OF COUNCILORS

Momentous problems have presented themselves this year, and our several Councilors have met them with the fortitude of veterans, such as getting county societies to reconcile their relations to such extent that new societies have been formed by the coalition of counties that had been and would have been unorganized still. As it is now, every county is organized. This has been largely the result of the efforts of our very active President, Dr. L. H. Reeves, and the never-let-go Secretary, Dr. Holman Taylor, and his office force.

It is suggested that close observation of proposed Honorary Memberships be made, so that none will

be left out of organized medicine, and certainly none so honored who are able to pay their full dues.

Refresher Courses were held in the following Councilors' Districts, ranging from one to five days in each District named:

First District, Dr. Ralph Homan, Councilor, held a series of Refresher Courses in El Paso.

Eighth District, Dr. Herman C. Eckhardt, Councilor, held a Refresher Course at El Campo.

Ninth District, Dr. Judson L. Taylor, Councilor, held Refresher Courses at Huntsville and Brenham.

Fourteenth District, Dr. M. L. Wilbanks, Councilor, held Refresher Courses at Greenville and Sherman.

Fifteenth District, Dr. Chas. A. Smith, Councilor, held Refresher Courses at Texarkana and Longview.

M. L. WILBANKS, Chairman,
C. E. SCULL, Secretary.

The report of the Board of Councilors was referred to the Reference Committee on Reports of Officers and Committees.

Dr. W. D. Jones then presented the report of the Council on Medical Defense, as follows:

REPORT OF COUNCIL ON MEDICAL DEFENSE

We wish to call attention to the fact that we carry a double file on all cases coming before the Council, one in the Secretary's office in Fort Worth, and one in Judge Freeman's office in Sherman.

Nine new cases have been filed since our last report. One was for faulty tonsil operation (one tonsil not removed, and the other one removed in part). This case has been tried and judgment rendered in favor of the defendant. Two of our members were involved in the case. One carried insurance, the other did not. We were pleased with the favorable outcome of this case.

Another interesting case was filed during the year. It was for unskilled use of *x*-ray and skin grafting, sixteen years ago. The defendant was not covered by insurance.

The next case of importance, alleged malpractice in hysterectomy on a syphilitic woman with a bad heart. An operation was followed by death. Defendant was not protected by insurance. Case has been tried, resulting verdict for defendant.

It would be largely a repetition to review the various allegations set up in these cases, but we would like to mention one other. In this case, the plaintiff alleged negligence in diagnosis between pregnancy and tumor, and an incorrect operation.

In these nine cases, it is interesting to note that none of the specialties in medicine have been neglected.

In discussing suits disposed of since the last report, may we explain that no suit won by a defendant in a trial court can be considered closed in our files until such time has elapsed as to bar an appeal. Since the last report we have had three cases finally disposed of, and three favorable verdicts in the trial courts. We are uncertain as to whether plaintiffs will appeal in these cases. It is quite likely there will be no appeal, but we cannot yet report them as finally disposed of.

Seven suits have been dropped since our last report on account of no information or activity in the past five years. However, regardless of time, should we receive any information from the defendants that plaintiffs had become active they would be placed on the active list and defended.

Three of our members who had suits pending have died. Their estates would have been defended had plaintiff been active since their death. These cases will be considered closed unless we receive information of reinstatement against the estates. In two instances in the past, we have successfully defended and disposed of two cases against estates.

Five suits have threatened since our last report. So far, we have been able to prevent filing in any of them. In one instance, plaintiff's attorney had petition ready to file. The chairman of the Council, with the aid of local attorney, was able to stop this suit.

Five threatened suits have been dropped because we have had no information in five years. Two were dropped on account of death of the defendants. There are fifteen threatened suits which we must carry in our open files until sufficient time has elapsed to warrant us in dropping them from our active list.

Twenty-seven pending suits are considered active. This may seem to be a small number, but we call attention to the fact that many of these suits involve more than one and as high as three physicians. Our surplus funds must be considered on the basis of the number involved in the suits. Our files show eighty-three physicians are involved in the cases disposed of and dropped from our books.

Many suits are filed and never reported to us. This is probably due to the fact that indemnity insurance is carried by the defendants. While we would like to have all these cases reported, that we may help in obtaining evidence, our financial support is not furnished unless for some reason a defendant needs counsel other than that furnished by an insurance company. To interfere in these cases might be to jeopardize the interests of the defendants, not to mention duplication of service.

Since 1938, seven nonmalpractice suits have been reported. We cannot use our funds to defend such cases.

The recently enacted amendment to the Medical Practice Act making citizenship a prerequisite to the practice of medicine in Texas was attacked on its constitutionality in a case styled Manual Garcia-Godoy vs. State Board of Medical Examiners. This case had considerable publicity in the lay press. Our general attorney, Judge C. T. Freeman, and his firm, defended the State Board, as co-counsel, with the State Attorney General. The case was tried in the district court of Travis County with a favorable verdict. A trial brief was prepared, covering every angle of attack. It was conclusive. The Council took charge of this case, and paid the expenses of the trial. We consider this money well spent and not only a benefit to the membership of the State Medical Association of Texas, but to every licensed physician in Texas, as well as a protection to the citizenship of Texas.

The Council has adopted a system of duplicate copies of all correspondence regarding malpractice suits, and rulings from Judge Freeman. This system keeps each member of the Council in touch with every case presented to any individual member of the Council. It saves much time and eliminates frequent meetings of the Council.

Our expenses have greatly increased this year, due to our defense of the constitutionality of our amended medical practice act. This case took about two-thirds of our annual income from dues. This expense was unexpected, but we had a healthy surplus, and that is what a surplus is for. It will not handicap our activities in the least.

We want to express our appreciation of the coöperation on the part of our members, and ask for criticisms, constructive or otherwise.

Judge Freeman has rendered valuable service, and we could not close this report without expressing our gratitude to him for his efforts in behalf of organized medicine.

Respectfully submitted,
W. D. JONES, Chairman,
HOLMAN TAYLOR, Secretary,
W. A. KING,
A. P. HOWARD,
W. L. BAUGH.

The report of the Council on Medical Defense was then referred to the Reference Committee on Finance.

Secretary Taylor then presented the report of the Executive Council, as follows:

REPORT OF EXECUTIVE COUNCIL

The Executive Council has been operating during the past year under the following instructions from the House of Delegates: (1) Continuation of coöperation with the State Board of Health and the State Board of Medical Examiners, but in each instance where there is definite recognition of the true principles of coöperation; (2) Continued and active opposition to socialized medicine, with authority to join other proper organizations with the same purpose; (3) Impress upon the medical profession and all concerned the fact that the medical profession is responsible for the development of medical and public health policies as no other group could possibly be, and that for that reason the doctor should be called into consultation wherever legislative or public health policies are to be considered, and that (4) We give no support to any organization of whatever character which does not recognize the responsibilities and importance of the reputable, ethical medical profession in dealing with public health and related welfare problems.

Co-operation With the State Board of Health.—We have had special opportunity of coöperating with the State Board of Health, due largely to the policy of the Board of consulting with appropriate groups of the State Medical Association in dealing with health problems. Indeed, the State Health Officer has requested the appointment of additional committees, similar to committees already existing, and the purpose of which is largely to assist the State Health Department in its activities. The importance of this situation, we would like to point out, lies in the opportunity thus given us to make a plea for an approach in every instance which will safeguard the traditions of the medical profession, not to mention its ethics and other considerations, most of any of which may inadvertently be violated in carrying on such complicated and far-reaching activities as those in which any well-organized health department must engage. Thus the President, upon request of the State Health Department, set up a Committee on Pneumonia, the immediate purpose of which committee was to help in formulating a control policy which would be effective and at the same time agreeable to the medical profession of the State.

Thus our Committees on Mental Health, Maternal and Child Health, Tuberculosis, Venereal Diseases, Postgraduate Medical Education, Industrial Health, Malaria, and Pneumonia, each with an ex-officio member in effect representing the State Health Department, have functioned admirably, not only in carrying out the immediate purpose of each committee, but the broader purposes of the State Department of Health. The reports of these respective committees will disclose their usefulness in this as well as other respects.

Proposed Council on Postgraduate Medical Education.—So notably have these committees performed, that it occurred to President Dr. Reeves, and State Health Officer Dr. Cox, that if these committees were grouped in the form of a Council, such as the Council on Scientific Work, with a long-time, overlapping term-of-office central membership, and an ex-officio membership of the other committees, there could be a greater degree of coöperation and coordination than now is possible, except where definitely and specially arranged for. Acting upon this suggestion, the Executive Council conferred with the several committees concerned, and with the State Board of Health and the State Health Department early in the fall. A temporary agency of the sort was set up, and it was definitely decided that the President should recommend to the House of Delegates that the State Medical Association By-Laws be so arranged as to carry the idea into effect, with the Committee on Postgraduate Medical Education as the central and permanent unit, the other committees named to serve as ex-officio members and to retain all of the responsibilities and prerogatives that have been given them, which would include, of course, their right to act separately on problems not concerning the balance of the group.

Postgradaute Medical Instruction has become a part of the work of our Council during the year, through the offer of the State Board of Health to finance courses for physicians, in our two Medical Colleges, on the subject of maternal and child health. Refresher courses along these lines have been promoted from time to time throughout the State, under the direction of the Board of Health, and in cooperation with the Board of Councilors and county medical societies. With those courses we have had no concern, other than to give them our benediction, but the new proposal had to be taken under very serious consideration by our Council, because of its implications, and because it was a new thing. This House of Delegates had never given consideration to any similar proposal.

The State Health Department, it appears, came into possession of federal funds which could be devoted to such a purpose. There was an amount sufficient to pay the costs of the courses in each of the Medical Colleges, and an honorarium to each selected student. Our Council, after extended consideration, approved the plan and directed the Committee on Postgraduate Medical Education to enter into active coöperation with the State Health Department, in putting the plan into effect. The committee concerned will make due report on this movement. It is not our province to go into detail in the development of these courses, but it perhaps should be said here that the fear expressed by some that in this manner federal agencies might develop a system of control of the practice of medicine, can hardly have any application. Certainly there is no evidence of anything of the sort either pending or probable. Indeed, the federal government has of necessity been re-educating physicians to enter the specialty of public health, and this movement is but an extension of the views long held by the medical profession that anything which serves to improve the physician will at the same time improve the service the physician may render his patients.

We continued to coöperate with the State Health Department in matters of legislation, following our last report, and with continued satisfaction. This matter will be discussed elsewhere.

Co-operation With the State Board of Medical Examiners.—As in the case of the State Board of Health, we have had special opportunity of coöperating with the State Board of Medical Examiners, and our experience there, as with the State Board of Health, has been very pleasant and satisfactory. We believe that both the Board and the Council have been entirely satisfied with our coöperative accomplishments.

Naturally, our joint endeavors have been very largely along legislative lines, as per our last report, but our most noteworthy accomplishment has been in the effective support we have been in a position to extend by way of justification in the courts of our recently amended Medical Practice Act. There have been two cases worthy of note in this connection.

We will refer to each of them herewith, briefly, as a matter of necessity.

Citizenship Requirement.—It will be recalled that one of the important amendments to our Medical Practice Act made by the last Legislature, was one requiring that candidates for the privilege of practicing medicine in the State be citizens in fact, and not merely in prospect. This provision of the Act was attacked very promptly. Through the invitation of the Attorney General, the State Medical Association was permitted to furnish co-counsel in the defense of this feature of the Act. In mandamus proceedings against the State Board of Medical Examiners, an applicant for examination held that the amendment in question violated the Fourteenth Amendment to the Federal Constitution, in which aliens are granted the same right to make a living as citizens, and that this right has been taken away by this amendment, by other than due process of law. Our plea was that the practice of medicine is a privilege and not a right, and that it is not granted citizens except upon terms set up by the Legislature. To make what could be a very long story short enough for this report, we may say that the court upheld our contention, and in doing so set out many reasons why citizenship should, in fact, be required as a precedent to the practice of medicine, which had not been entered in our plea.

We should not close this report on this particular activity without thanking our Attorney General and his Assistant, the Honorable Morris Hodges, who was assigned to the case, for their very coöperative attitude in the matter. Neither should we fail to thank our general attorneys for very exceptional service in this case. Indeed, the brief prepared in this case has become of national importance. Copies have been sent to all state medical associations and to all state boards of medical examiners. There are twenty-two states which have citizenship requirements for medical licensees, and other states are contemplating the same sort of law. So far as we know, this is the only brief of the kind.

The Board of Trustees of the State Medical Association will report that this litigation has cost the Association better than $2,500.00, and that the money was advanced by the Council on Medical Defense. It was taken from the surplus of the Medical Defense Fund. We appreciate very much this spirit of coöperation upon the part of the Board of Trustees and the Council on Medical Defense.

Reciprocity on Limited License Basis was very definitely forbidden by amendments to the Medical Practice Act during the last session of the Legislature. The right of the State Board of Medical Examiners to classify medical colleges and exclude from consideration those deemed below a desired standard, was also confirmed and extended. Now come certain osteopaths licensed to practice osteopathy in Missouri, with the plea that refusal of the Texas Board to recognize their osteopathic licenses and exchange for them licenses to practice medicine in Texas, is in violation of the constitutional requirement (of Texas) that there shall be no discrimination as between schools of medicine. The case was decided in the lower court in favor of the Texas Board. An appeal is now pending, and possibly will have been heard by the time this report is presented.

We have coöperated wholeheartedly, and at relatively small expense, with the State Board and the Attorney General in resisting this suit. The court has, it seems to us, ruled wisely in deciding (1) that the Texas Board was acting in compliance with the plain mandate of the law, and that no constitutional violence had been done by the law; indeed, that to extend reciprocity licenses to these claimants would have been to, in fact, discriminate against the schools required to come up to the Texas law. It was held that the Missouri osteopathic law merely granted the right to its licensees to practice the "science of osteopathy," which is not, and cannot be, the same as the right to practice medicine in all of its branches, as is the case in Texas. If we are correctly informed, the court again said that the practice of medicine is a privilege and not essentially a right, and that the Legislature can extend any privilege whatsoever upon its own terms. A very extensive and informative brief has been prepared in this case, and it is a very important brief.

We again have to thank the Attorney General of the State, our own attorneys, the Board of Medical Examiners, our own Board of Trustees and the Council on Medical Defense, for the success (so far) of this litigation, a litigation in which the Executive Council has had to enter because of the interim nature of its function as relates to this House of Delegates.

Finally, in connection with the problem involved in the litigation under discussion, we would observe that there is no escaping the responsibility of the medical profession in the premises. It would be useless to aid in procuring, sometimes at considerable expense, the enactment of laws in the interest of public health, if they are to be invalidated through attacks such as have taken place in the two cases here recited. It seems to be generally conceded that the medical profession must concern itself with medical and public health legislation in the interest of the public welfare. No other group may effectively and conclusively advise concerning such matters. It is just as much our obligation to help in maintaining and enforcing these laws as it is in procuring their enactment. True, there is a very efficient State Legal Department, as the success of the State Board in resisting attacks on the law discloses, and that Department is by law required to represent the State Board in any and every sort of litigation. However, it is a recognized fact that our Attorney General's Department is undermanned. It needs help, and it usually gets it in the way we have rendered help in these cases. We think there is an important factor which enters this situation which is generally overlooked. There are those who would like to join the Attorney General in such cases, but with entirely different objectives from those of the Attorney General. He must be in a position to discriminate between those who would help and those who would hinder, all coming under the same banner. For that reason, among others, we are appreciative of the coöperation we have had in these matters.

If the decision of the lower court is upheld in this particular case, the State Board of Medical Examiners will henceforth be in a position to exclude from license to practice medicine in Texas, whether by examination or reciprocity, those who are inadequately educated in medicine. If this dream of the past thirty-five years comes true, Texas will be saved the embarrassment of relinquishing to lay control the portal of entry into the practice of medicine in the State, through such legislation as the basic science law. We will likewise be saved the necessity of procuring from the higher courts many decisions heretofore procured, and by such new legislation made inapplicable.

Opposition to Socialized Medicine.—Our principal concern in this connection has been national. So far, there has been little need for activity in Texas. About the only opportunity of the sort that we have had has been to meet quite frequent calls for discussions of socialized medicine before ready-made audiences. The central office has been very active in this connection, securing speakers for every platform possible.

An important phase of the problem has arisen in connection with the high school debates of the present school year. The subject for this debate is "Resolved, that Texas Should Adopt a System of Complete Medical Service Available to All Citizens at Public Expense." It will be noted that this is not essentially socialized medicine. However, it has been a very fine vehicle for the discussion of that problem. The central office has been very active in providing those in charge of these debates, and the debaters themselves, with literature bearing particularly upon our side of the argument. More than fifty library packages on the subject have been kept almost constantly in circulation during the period of time covered. Any debater has been able to procure one of these packages upon the endorsement of his or her family physician. We believe the results of this activity have been good. Certainly the information thus extended would never have otherwise been extended.

Of primary importance in this connection, has been the assistance the central office was able to render in the preparation of the Handbook prepared by the school authorities for the study of the subject. This Handbook carries several articles which were furnished by us. We confess to considerable disappointment that the Handbook likewise carries a number of articles advocating socialized medicine, which we think are thoroughly unreliable, and certainly misleading. Even so, it seems to have been a very good idea that at least something be furnished in opposition to socialized medicine, not only to those who have prepared the text for the study of the problem, but to those who have been participating in the debates. The Secretary of the Council addressed two large conferences of debaters and coaches, on this subject.

Activities nationally in connection with socialized medicine have been so varied and so indefinite, that we refrain from discussing them at this time. Suffice it to say that our Legislative Committee is in touch with the situation at Washington, and will do what is necessary to be done in that connection. Most of these problems come up in connection with our legislative activities, and will be discussed under that head.

We have been authorized to join other proper groups in fighting socialized medicine. We have not had occasion to do anything of the sort actively, but we have given sympathetic support to the "National Physicians' Committee for the Extension of Medical Service," a nationally organized group designed to do by way of propaganda and publicity in this connection, what strictly scientific organizations cannot themselves do. It appears that the leaders of this new movement are coincidentally the leaders of organized medicine nationally. It is fair to conclude that policies of the new group will be in line with policies of the American Medical Association, which means, also, the policies of the State Medical Association. Our own Dr. E. H. Cary of Dallas, is Chairman of the Committee, and some of our most dependable members hold various positions subordinate to that committee.

MEDICAL AND PUBLIC HEALTH POLICIES should invariably and completely be developed in consultation with the medical profession. Our Council has been ordered by this House to impress this fact both upon the medical profession and the public. We have had little opportunity to do that, but we have done what we could. Our Legislative Committee has quite generally let it be known that it will not coöperate in any legislation with which it has had no opportunity to become acquainted, and about which it has not been asked to advise. Heretofore it has happened that we have been called upon to render assistance in the passage of measures, the objectives of which have been worthy, but the immediate provisions of which have been rather questionable from the standpoint of the medical profession. Such situations at once create a dilemma for us. On the one hand we desire the attainment of the objectives in question, while on the other hand we do not like the procedures involved. We seek to avoid any such dilemma. In our coöperation with the State Board of Health and the State Board of Medical Examiners, as already stated, we have been able to avoid such embarrassment. We have helped to develop all of the policies which we have been called upon to help put over. It is our opinion that this policy has been wisely established, and should be perpetuated.

STATE LEGISLATION was brought up to date in our last report. There is not much more to report, the Legislature at that time serving its last days. There were, however, some developments at the last to which we would refer.

The measure requiring pre-marital examinations, it will be recalled, had been opposed by our Legislative Committee on the ground that it provided an unwarranted requirement as to treatment, in that an examining physician must make specified serologic tests. It was generally conceded, of course, that serologic tests are essential to a thorough examination in most instances, but not always so. Furthermore, it was well known that laboratories giving these tests had not been standardized, and the work of all of them could by no means be approved. However, our opposition to the measure was withdrawn, when it was amended to merely require the use of "standardized" tests, allowing the examining physician to exercise his judgment as to which tests should be used. It was understood at the time that a measure then pending, requiring the standardization of laboratories by the State Board of Health, would be passed. However, the organization sponsoring the pre-marital examination measure, so we were advised, was largely responsible for the defeat of the laboratory standardization measure, in addition to which new legislation was introduced to substitute for the pre-marital bill from which our opposition had been withdrawn. This and additional maneuvering resulted in the defeat of the bill.

Had the matter been left in our hands, or in the hands of any group willing to be coöperative and really interested in the welfare of the public, satisfactory measures along these lines could easily have been enacted into law. It certainly seems ridiculous to the medical mind that the law should set up expensive and complicated procedures in the effort to prevent disease where there is little or no chance for the spread of disease. Any physician will readily admit that all of our people should submit to such periodic examinations as will not only enable them to protect themselves from the ravages of disease, but to at the same time protect each other from the spread of disease. But in approaching the problem, care should be had to be reasonable, and to take advantage of percentages and other media of relief from what may well be in the beginning untenable restrictions.

The measure regulating hospital insurance, to which we referred in our last report as then pending, became a law, and the so-called "Group Hospital Service, Inc.," now apparently in very successful operation, is the result. In the development of this service, the medical profession has been asked to join by representation on the Board of Directors of the new company. No formal endorsement has been extended, nor has any been asked. It is sufficient to acquiesce, and to help where we can. It seems the better part of wisdom to encourage our patients to provide in advance for hospital service. By doing so they contribute considerably to the success of their treatment, and certainly they will thereby make available additional funds for medical service.

It is along just such lines that a medical service for our people who are in the lower financial brackets, will possibly be developed.

The additional measures, deemed to be undesirable because of their interference with the service of hospitals through the extension of unwarranted regulations, which we mentioned in our last report, were withdrawn by their sponsors, when they became convinced that the effect might be more harmful than helpful.

The principal legislation pending at the time our last report was closed, was that making appropriations for the support of the Health Department. Our Legislative Committee continued to make every proper effort looking to the financial support of the Health Department. As a matter of fact, the House of Representatives agreed to an appropriation of $350,000.00, which was a substantial increase over the appropriation for this purpose by the previous Legislature. The Senate agreed on substantially the same appropriation, in fact raising the ante several thousand dollars. There being a difference in the amounts appropriated by the two houses, the measure was referred to a Free Conference Committee. This committee, without consulting any of the groups in a position to know what is essential and what may be dispensed with in public health appropriations, reduced the total appropriation by some sixty thousand dollars, resulting in an appropriation entirely inadequate for the purposes in hand.

It will be understood that a Free Conference Committee is supposed to adjust differences between the two houses. It is not supposed to legislate on its own account. It will be understood, further, that Free Conference Committees do not conduct hearings, as do other committees of the Legislature. Under such circumstances, no one interested in the procurement of funds for the Health Department could approach the committee, except upon invitation. As we have said, and so far as we know, no such representatives were called into conference. Another factor entering the case, and one which we feel would justify criticism on our part, is the apparent fact that in adjusting the cuts to be made in the appropriation for the Health Department, neither the State Health Officer nor any member of his staff was called into consultation by the committee. And even that is not the end of the story. The Governor, in the proper exercise of his authority, saw fit to reduce still further the already attenuated appropriation for health purposes.

National Legislation.—We consider the legislative situation nationally to be more important, basically, than State legislation, at least at this particular time. It is at Washington that legislation underwriting socialized medicine in the states will most likely be enacted. So far as we can judge at the present writing, the best policy for the State Medical Association to follow with respect to State Legislation, in general and in particular, is to sit tight, help where help appears desirable, but in general keep out of the limelight. In the matter of National legislation, it may be necessary to become a bit more militant. There are measures now pending in the Congress which are extremely objectionable from the angle of ethical, traditional, and scientific medicine. There is not much we can do about them directly. We are not in a position to send representatives to Congress to consult with committees and members of Congress. Such contacts must be left generally to representatives of the American Medical Association, or, possibly, the recently created "National Physicians' Committee for the Extension of Medical Service," as circumstances may indicate. However, hardly a physician in Texas but who has a more or less intimate contact with some member of Congress. If all such contacts were utilized in an educational way as relates to socialized medicine, the way would be much easier, in encompassing the defeat of measures seeking to impose this further European philosophy upon our people. And in this connection, we would like to observe that some of the most important legislation pending in Congress today appears to be of purely local importance, whereas the real jeopardy is national. For instance, there is a bill pending now which would prohibit the making of any form of vaccination or inoculation a condition precedent to entrance into any public or private school or college in the District of Columbia. Once this measure becomes a law, a similar measure will appear in each state legislature. A measure is also pending which would enable corporations to practice medicine. Such a measure can be wholesome, but it can also, and is most likely to be unwholesome. It all depends on the form it will take in the process of passage. A measure is also pending which would recognize the practice of "naturopathy." It will be recalled that such a measure was introduced in the Texas Legislature two years ago. With such a law in the District of Columbia, a boost to similar legislation in the states will be immediately forthcoming. And so on down the line. It is this sort of legislation which should be called to the attention of Texas Senators and Congressmen. They may not realize its importance.

Attention is called to an article in the January 13, 1940, number of *The Journal of the American Medical Association,* beginning on page 147 thereof, under the title, "Medical Bills in the Seventy-Sixth Congress." This article was prepared by the Bureau of Legal Medicine and Legislation of the American Medical Association. It is complete and authentic. It deserves and will merit the closest reading by all who are interested in public health legislation, and in the welfare of our people from the medical and public health angle.

Plans for the Distribution of Medical Service in Texas are envisioned by a motion adopted by the Executive Council at Fort Worth, March 10. This motion is quoted here for the sake of the published record: "* * * that the Council on Medical Economics be directed to prepare a plan for the distribution of medical service, which will accomplish the objective of the movement and without violation of either the spirit or the letter of medical ethics; that the Legislative Committee be directed to prepare for the forthcoming Legislature such enabling act as may be necessary for the proper operation of the plan, and that the reports of the Council on Medical Economics and the Legislative Committee, be submitted to the Executive Council for approval before action is taken."

It is probably best not to enter into a detailed discussion of the procedure, or the need for any such procedure provided for in this motion. To do so would quite probably confuse the situation. It seems best to permit the Council on Medical Economics to thresh out all of the details, study the plans in more or less successful operation in other states, and then prepare a tentative plan for Texas, one which may be expected to prove successful under the conditions existing in Texas, and, as the motion states, in entire accord with the ethics and traditions of the medical profession, then have the Legislative Committee prepare any necessary enabling legislation, after which there can, should and must be complete discussion by at least the Executive Council, and this House of Delegates, if feasible, together with full publicity. This is a large problem, and one of extreme importance to not only the public, but the medical profession as well. There are such implications, and such chances for disturbing repercussions, as to call for much deliberation in counsel. Hence this decision.

Co-operation With Texas Safety Association.—Following a cordial invitation from the Texas Safety Association, Incorporated, this Council entered into active coöperation with several groups, headed by the Safety Association, in an effort to make our Texas highways safer for the multitude which uses them. Thus we have joined not only the Texas Safety Association, but the Highway Department, the Department of Public Safety, Department of Education, Attorney General's Office, and the Texas Bar Association. In our agreement with these organizations, it is distinctly understood that the State Medical Association of Texas cannot be obligated financially except following action of the appropriate authority of the Association. It is partly through these organizations that our Committee on Fractures has been able to accomplish so much in the matter of its releases pertaining to accidents on the highway, a matter which will be reported upon by the Committee on Fractures, we presume. Indeed, the only obligation involved, so far as we are concerned, is that of doing what we can, independently and in conjunction with the other agencies mentioned, to minimize accidents on the highways.

Recommendations.—It is recommended:

1. That the Executive Council continue in its cooperation with the State Board of Health and the State Board of Medical Examiners, under the existing policy with regard to the matter.

2. That the policy of opposing any form of socialized medicine, from whatever direction and along whatever lines, be continued, and that the Council be authorized to join worthy groups in such activities.

3. That we continue the policy of coöperating only with groups and in movements pertaining to medicine and the public health, wherein the medical profession as represented by the State Medical Association and its subordinate bodies, is given an opportunity of developing, and certainly of approving, the activities involved. It is the continued opinion of this Council that the physician is the only individual who is really in a position to know what should and should not be done in the field of medicine and the public health.

4. That the following motion, adopted by the Executive Council and referred to in this report, be adopted by this House of Delegates as a body, and the proceedings set up therein be immediately set in motion: "* * * that the Council on Medical Economics be directed to prepare a plan for the distribution of medical service, which will accomplish the objective of the movement and without violation of either the spirit or the letter of medical ethics; that the Legislative Committee be directed to prepare for the forthcoming Legislature such enabling act as may be necessary for the proper operation of the plan, and that the reports of the Council on Medical Economics and the Legislative Committee, be submitted to the Executive Council for approval before action is taken."

Respectfully submitted,
L. H. Reeves, Chairman,
Holman Taylor, Secretary.

The report of the Executive Council was referred to the Reference Committee on Reports of Officers and Committees, with the exception of that part of the report which deals with postgraduate medical instruction, which part was referred to the Reference Committee on Scientific Work.

Secretary Taylor: The councilor for the Ninth District, Dr. Judson Taylor, has handed me two nominations for honorary membership from the Harris County Medical Society, Dr. W. M. Brumby and Dr. Seth A. McConnel. These nominations were referred to the Board of Councilors as a Reference Committee.

Dr. A. C. Scott then presented the report of the Council on Scientific Work, as follows:

REPORT OF COUNCIL ON SCIENTIFIC WORK

The chairman of your Council on Scientific Work wishes to begin this report with a very sincere expression of appreciation to the President and President-elect for their coöperation in appointing officers for the various sections early enough for them to have opportunity to become thoroughly acquainted with the work of the Council and to develop excellent section programs. It is well known in racing circles that the horse that gets the start has the best chance to win. By starting immediately after each annual session to plan for the next, certainly we should build the best scientific program possible.

The section officers of the present administration with the President are to be congratulated on the selection of honor guests for this annual session—an outstanding array of teaching talent. They are also to be commended highly for the excellent section programs that they have prepared for this meeting.

The Council on Scientific Work can justly take pride in the exceptional programs arranged for the general meetings, which include the combined sections meeting on Thursday afternoon, as well as the clinical luncheons. The subjects which will be discussed by our honor guests are all of great interest to the medical profession, and this annual session should break all records in attendance. Whatever else may be said about doctors, it is unfailingly true that they will attend meetings where there is an opportunity to learn something and better themselves in their profession. The constantly increasing attendance on our annual sessions is definite evidence of the constant improvement in our scientific programs.

In this connection, our scientific exhibits continue to be outstanding and their teaching value is increasing from year to year. The individual scientific exhibitors at this annual session are to be complimented for the time, effort, and talent displayed in their exhibits.

The Council on Scientific Work would again commend especially the Fracture Committee of the State Medical Association which has arranged for demonstrations of fracture treatment for three days of the annual session, utilizing the teaching talents of fifteen thoroughly qualified clinical teachers, who at specified hours will demonstrate the actual procedure used in the treatment of fractures of the spine, femur, and elbow, and instruction in the application of plaster of paris.

The Fracture Committee of the State Medical Association, in addition to the fracture demonstrations at the annual session, has also done an outstanding piece of work in educating the public in regard to first aid for fractures, until medical treatment becomes available, in the publication of syndicated articles in Texas newspapers under the caption of, "Leave 'Em Where They Lie." These simple articles have been accompanied in each instance with the following guide line, "Prepared by the Fracture Committee, Texas State Medical Association; sponsored by Texas State Highway Department and Texas Public Safety Commission." The articles are written in simple language, easily understood by the layman, and are authoritative, orthodox expositions. Not only have they attracted great interest on the part of the public throughout Texas, but having been sent to the secretaries of other state medical associations by the Secretary of our own Association, they have been commended highly throughout the country, and several other state associations have indicated a desire to publish the same or similar articles in their states.

The Council on Scientific Work is pleased to note that another State Association committee, The Pneumonia Control Committee, has prepared a teaching exhibit among the scientific exhibits, on measures to be used in the control of pneumonia.

Again an excellent motion picture exhibit has been arranged for. The Council urges that members of the House of Delegates find time during the annual session to visit the scientific exhibits which are displayed on the Fifteenth Floor of the Hotel Adolphus. It is to be hoped that all who are in attendance on the annual session will do the same.

The Council on Scientific Work, at its mid-winter meeting, received a request from the Texas Pediatric Society for a separate Section on Pediatrics of the State Medical Association. It was pointed out that with the curtailed time period available to section programs, and with the large number of pediatricians now in Texas, a separate section is needed for the presentation of pediatric articles on the annual session program. Since the resolution setting forth this request will be presented elsewhere, its details will not be given here. Suffice it to say that the Council on Scientific Work after due deliberation and extended discussion of all factors concerned, voted its approval of the request and recommends that the House of Delegates, through proper amendments to the By-Laws, create a new Section on Pediatrics. It is recommended that the present limitation of 25 papers be maintained for the Section on Medicine, and that 18 papers be the limitation for the new Section on Pediatrics. If the House of Delegates sees fit to amend the By-Laws providing for the two new sections, the matter of guests for the two new sections will have to be decided upon. The Council on Scientific Work recommends that the new Section on Medicine be allowed two guests, and the new Section on Pediatrics be allowed one guest.

Respectfully submitted,
A. C. Scott, Sr., Chairman.

The report of the Council on Scientific Work was then referred to the Reference Committee on Scientific Work.

Dr. C. C. Cody then presented the report of the Council on Medical Economics, as follows:

REPORT OF THE COUNCIL ON MEDICAL ECONOMICS

The past year has been an active one in the field of medical economics. The American Medical Association, many component County Societies and a host of members have made constructive and informative contributions to the subject. The American Medical Association has rendered two services of especial merit to the nation as a whole. The first of these was the statement of the case of the American economic system of the practice of medicine at the hearings by a sub-committee of the United States Senate on Senator Wagner's bill on the so-called National Health Program. The representatives of the organized profession, under the leadership of our own Dr. E. H. Cary, made a brilliant and unanswerable argument. This group has and will continue to receive the grateful appreciation of all thoughtful citizens throughout the land. The second is the Platform of the American Medical Association. The Platform is a guide *par excellence* for a sound approach to a consideration of the highly complex problems of medical economics. Every member of our State Association, and particularly of this House, should be thoroughly familiar with it.

VOLUNTARY MEDICAL SERVICE PLANS

The legislatures of Connecticut, Michigan, New York, Pennsylvania and Vermont, during the year have passed laws authorizing the establishment and operation of non-profit medical service corporations. The New Jersey State Medical Association is operating a similar medical service company under the authority of the Insurance Commissioner. A composite outline of these laws would probably produce a clearer conception of the situation than a detailed analysis of each. The general purpose of these medical service corporations is to furnish medical care to subscribers or policy-holders, by licensed doctors at the expense of the corporation. In two states the operation of the plan is limited to the low income group, in four it is not so limited. A restricted medical service is provided in five states, while one state has no such limitation. Doctors of medicine only participate in the plan in five states, while one state specifically provides for no discrimination against recognized schools of medical practice. The right of a subscriber to select a physician of his own choice is granted in one state, restricted to physicians registered with the corporation in three states and inferentially denied in two states. The corporation pays the physician direct in four states, and in two an indemnity is paid the subscriber. It does not seem to be contemplated in any state to attempt to pay the physician his usual fee but, rather, according to a reduced fee schedule. The rates and contracts must be approved by the Insurance Commissioner in all six states.

The Dallas County Medical Society has recently devised a mutual health insurance plan, with partial coverage, after three months, of the subscriber for the services of the doctor. The subscriber has freedom of choice of physician. Inferentially, the subscribers are accepted preferably in groups. The service is planned for the low income group, with the upper limit fixed at $1,800 per annum. The basic premium is $18. The doctors inferentially will be paid according to a reduced fee schedule.

Tarrant, Bexar and Harris County Medical Societies, have also evolved plans for the care of the low income groups. It is reported that a health insurance company in Fort Worth is rendering satisfactory service to the laity and the profession. While the Tarrant County Society has given no official approval of the company concerned, the company is seeking the advice of a number of doctors, and is rendering a strictly ethical service. The Bexar and Harris County Societies have each established a medical service bureau the purpose of which is to finance the low income group in paying the physician and the dentist. Instead of the usual pre-payment plan, these Societies use a post-payment plan for any income group, in which the patient and the physician agree on the remuneration for professional service. The plan is working satisfactorily for the low income and other groups.

The agreement of the State Medical Association with the Farm Security Administration, is in operation in many counties in Texas. Numerous complaints have been received from members and County Societies, not about the basic agreement but about the methods employed by the FSA in working it out. These have been reported in full in a conference between our Secretary and the Medical Director of the FSA. The Medical Director and his associates have promised full coöperation with the doctors under the terms of the agreement, so that this service can be expected in the future to be more satisfactory. The Medical Director urges the "pooling" of funds, which the Council had previously refused to allow. The "pooling of funds," briefly, is to place the allotments, grants and other funds, in a common pool, and at the end of the year, or some other convenient period, to distribute them among the participating doctors on an equitable basis. The "pooling of funds" has been employed in several states with results

reported to be satisfactory. The Council recommends an amendment to the basic agreement allowing the "pooling of funds," with suitable safeguards.

The FSA has requested the coöperation of the State Medical Association in organizing and administering the medical care of transient farm laborers. Camps for 250 families each are being built at Sinton, Robstown, Raymondville and Weslaco. The State Medical Association is requested to nominate three physicians to serve on a Board of Directors, the other four directors being FSA officials. This Board of Directors will supervise the medical service for these clients of the FSA. The FSA wishes to operate a "clinic" in each camp, with medical service rendered by rotating staffs, the remuneration to be on a clinic hour basis, in accordance with such agreements as may be made with the County Medical Society concerned. The FSA further requests that a "referee," on a part-time payment basis, be appointed by the State Medical Association. The "referee's" duties will be to pass upon the claims of physicians for special medical service rendered to clients of FSA.

EVOLUTION OF PRACTICE

The economic system of the practice of medicine in the United States today is neither the result of blind chance nor static in immutable order crystallized by custom or ethics, but is a rational evolution and kinetic in capacity to adapt itself to the expanding needs of the American public. It is quite elastic, equally capable of contracting to simplicity itself in sparsely populated sections, or expanding to a complex and intricate organism in large cities or highly industrialized areas. It has the innate ability to fill the requirements for the medical care of the American people by efficient and practical methods. The problems of distribution of medical service can be solved as they arise, by the formulae so clearly stated in the Platform of the American Medical Association.

Various State Medical Associations, and in Texas the Dallas County Society, have proposed voluntary medical service plans to meet the medical needs of the low income group. These programs have consistently taken the form of health insurance. It seems to be the consensus of organized medicine today that voluntary health insurance is a good vehicle to serve the needs of the low income group. The strongest feature of these plans is the demonstration of the concern and interest of the medical profession in unselfishly relieving human suffering. The provisions in these various plans—as might be expected, which uniformly show the least study and poorest understanding of the problem, are those pertaining to premiums and payments for the service of the doctor.

HEALTH INSURANCE FOR TEXAS

The Executive Council of the State Medical Association at its meeting on March 8, requested the Council on Medical Economics to ponder the feasibility of a voluntary medical service plan for Texas. The legal phases of voluntary health insurance and the legislative procedure, have been worked out in seven states. The legal questions on health insurance can be referred to our General Attorney, Judge Freeman, and procedure in legislation to our Secretary and the Legislative Committee.

There are a number of important factors in health insurance, which must be studied and carefully considered in their relation to each other before a decision can be reached. Among these factors are the following:

1. Private practice renders a more efficient medical service at less cost to the individual and to the community over the long term, with a larger income for the doctor, than has been shown either by health insurance in this country or by socialized medicine in foreign countries. The reason for this is that private practice has no middle-man who requires about 40 per cent of the cost of medical service for overhead or administrative expense. In health insurance, the 40 per cent overhead is paid either by the low-income group or by the doctor. The low-income group may pay the overhead directly; or, if the premium is partially paid by the employer, with a reduction in real wages. The 40 per cent overhead may be paid by the doctor in the form of a reduction in fees. The latter method is usually employed.

2. Insurance is an act to secure the policy-holder against financial loss or damage by a contingent event. This definition is just as applicable to health insurance as it is to life, fire, marine or accident insurance. No beneficiaries of a life or fire insurance policy expect to get anything cheaper merely because they are policy-holders. It is not clear that a doctor has any obligation to serve a policy-holder for a smaller fee than he would receive for the same service from a private patient in the same economic and social group. It follows, then, that the primary purpose of health insurance is to protect the policy-holder against the financial loss due to the cost of the doctor's services being above an annual average per capita cost for the doctor's services. In short, health insurance makes the actual cost of the physician's services per annum the same as the annual average cost. The protection of the policy-holder against this loss is worth the cost of the insurance company's overhead, and he should pay it.

3. It is well known that the costs of medical service in 20 per cent of illness is much higher than the annual average per capita cost. It is not unusual for a family to have more than one severe illness in a single year. Health insurance is particularly fitted to cope with situations similar to these to the mutual satisfaction of the patient and the doctor. Major illness is sufficiently frequent to warrant the consideration of health insurance as an agency in serving the medical needs of our people.

4. Most of the plans for health insurance depend upon private practice for a subsidy. A policy with partial, limited or restricted coverage, is subsidized by the physician. This is accomplished by specifically excluding tuberculosis, venereal disease, mental and nervous diseases, chronic alcoholism and drug addiction from the benefits of the policy. The effect on the doctor of eliminating this group of diseases is to force him to serve these patients in the low income group without remuneration. In short, the insurance company usually refuses to serve that group of patients which most needs the service. Of course, if the most expensive group of diseases is not covered, a lower premium can be quoted, which, in turn, gives a false idea of the costs of medical service. The medical profession is quite within its rights in demanding that health insurance be completely self-sustaining and not dependent upon the physician for subsidy. The doctor is primarily concerned with the medical needs of his patient, not the solvency of an insurance company.

5. Health insurance is far more complex than fire insurance which, in turn, is more intricate than life insurance. Yet the rate structure of a premium for a policy in health insurance is far simpler than that for life insurance. The fire and life insurance companies have long abandoned an average premium for all contingencies, such as is proposed for health insurance companies. These older companies found out years ago that an average premium for every contingency was impractical. If the rate was too high, the policy holder was cheated, and the volume of business decreased below the level necessary for overhead. If the rate was too low—as usually hap-

pened, the service became inferior, or the company promptly went broke. The very simple rate structure of premiums in health insurance may be the real basis for nearly all the difficulties with this type of insurance.

6. The overhead for a non-profit corporation operating in a competitive field is usually greater than the cost of administration plus the profit of a company run for profit. Employee management for corporations has usually had disastrous results.

7. Charity is one thing and insurance is another. If the two are mingled in the same enterprise, charity can easily become the cloak for inferior service to the patient, or for exploitation of the physician. It may do both.

8. The Council offers no advice on a rate structure for premiums in health insurance, or on the consequences of health insurance on the annual average per capita income of the medical profession, because it is aware of no statistical data of sufficient actuarial accuracy upon which to base estimates.

9. Medical service at a fee the patient can afford to pay, is the basic factor in the economics of private practice. Persistent efforts have been made to extend this economic rule of private practice to all other types of practice. The Council refused to allow the extension of this rule to the clients of the FSA in the agreement with the Federal government. It is doubtful whether this rule should be extended to health insurance. The reason for this is that in private practice whatever the principals agree to may be accepted as equitable and final. But in health insurance, the remuneration of the doctor should be based upon the costs to the doctor of rendering or distributing his service to the patient.

10. It is an open question whether it would be better for the State Medical Association to organize and operate a non-profit health insurance company, or maintain a service to investigate the health insurance companies doing business in Texas, the terms of their policies and the remuneration of doctors, and report its findings as "accepted" or "not accepted," to the members of the State Medical Association. Each method has its advantages. However, the latter procedure would enable our Association in large measure to police the health insurance companies, and so afford some protection to the policyholders and to the physicians against exploitation. If the State Medical Association owns an insurance company, as a competitor it may be expected to lose all control over the practices of other health insurance companies.

Health insurance is not only a complex subject but is also highly controversial. Strong arguments can be presented against some of the above views. The problem should be studied and discussed until its practical solution is worked out. As a beginning, the Council re-affirms its previous position that voluntary health insurance in principle is sound from a medical economic standpoint. The evidence is quite convincing that a real need exists for health insurance, particularly as an expansion of medical service to the low income group. The Council is equally certain that the problem can be solved to the benefit of the patient and the satisfaction of the physician. It is doubtful that the House of Delegates is ready today to adopt a formula of general principles for the guidance of a health insurance company. The Council is quite positive that it has no statistical data upon which to advise a rate structure for premiums on health insurance policies, or a fee schedule for doctors. An insurance premium and fee schedule entirely satisfactory in Michigan, New Jersey or Vermont, may or may not be practicable in Texas. No emergency requiring precipitate action exists at present in Texas. Therefore, the Council on Medical Economics recommends that the House of Delegates approves voluntary health insurance in principle, and requests the President to appoint a special committee, the duty of which to be the presentation of a definitive report on this subject to the Executive Council, or to the House itself, at a later date.

STATISTICAL SERVICE

If this Council is expected to furnish information or advice to the State Medical Association, its officers and members, on questions concerning the economic aspect of voluntary health insurance, hospital insurance, compensation insurance, State Medicine and private practice, the service should be based on accurate and non-partisan data in order to be of any practical value. The main value of such statistics would be in the routine replies for information from the members and officers. If this service did nothing more than fix the butte of income in the minds of our members, it would be worth many times its cost. The Council recommends the organization and maintenance of a statistical service in medical economics for the State Medical Association, with a request to the Board of Trustees to provide funds as means afford, for its support.

The Council wishes to express its gratitude to our efficient Secretary, Dr. Holman Taylor, whose untiring efforts and sage advice have been invaluable throughout the year.

Respectfully submitted,

Claude C. Cody, Chairman,
W. F. Starley,
W. C. Tenery,
C. C. Foster,
Thomas B. Bond.

The report of the Council on Medical Economics was then referred to the Reference Committee on Reports of Officers and Committees, with the exception of that part of it dealing with "statistical service," which part was referred to the Board of Trustees as a reference committee.

President Reeves: At this time it is my pleasure to recognize the Fraternal Delegate from Louisiana, Dr. A. A. Herold of Shreveport. Doctor, will you please come forward. I want to present you to this body. (Applause.)

ADDRESS OF FRATERNAL DELEGATE FROM LOUISIANA STATE MEDICAL SOCIETY

Dr. A. A. Herold: It is, indeed, a pleasure and a privilege to be able to extend to you greetings from your sister state of Louisiana. We recently had a visit from your Dr. Ferguson, Fraternal Delegate, to our State Medical Society, in New Orleans, and we appreciated his remarks and his good wishes very much.

This is the second opportunity that I have had to greet you in this capacity. Seven years ago, in Fort Worth, I was fraternal delegate, and I told you at that time that while Texas was the largest state in the Union in size, Louisiana was the only "Long" state in the Union. I am happy to report that beginning tomorrow this "Long" state will go out of existence. (Laughter and applause.) In redeeming Louisiana from this regime, which was started by a very shrewd, resourceful and brilliant young man, the late Huey P. Long, a great deal of corruption, misappropriation and disgrace for the state has been removed.

I have been interested very much in the reports of your committees and councils, especially about your litigation over the constitutionality of your medical practice act.

We have had a very unique situation in Louisiana. In fact, Senator Ellender has been quoted in Washington as saying that Louisiana was taking

the lead in state medicine. The legislature four years ago enacted a bill creating a state hospital board, and Governor Leche appointed on this board four men and himself, all non-medical men. This board was created for the purpose of taking care of the indigent sick or injured in their respective localities and paying the local doctor for his services or, in lieu of that, to transport them either to the nearest state hospital—we had one in Shreveport and one in New Orleans, or subsidize beds in existing hospitals for taking care of them. It was a law of merit if properly administered, but instead of doing that, instead of subsidizing beds as they were supposed to do, and taking care of these people, they devoted all the money they had to buying and building additional hospitals, so that we now have six state hospitals in Louisiana which are run without any real restrictions, admitting state employees and officials for free service at the expense of the taxpayers. And I am glad to say that with Mr. Jones, who goes into office tomorrow, we have a member of organized medicine for lieutenant-governor, and with his help we expect either to eliminate this state hospital board, or have it preeminently composed of doctors. That is one problem that you haven't had here. I am glad to be here at this great meeting, and in the State of Texas, which has produced so many prominent men, men who have done so much for the world, like General Sam Houston, for whom our new governor is named, Sam Houston Jones, Davy Crockett, John Garner and Holman Taylor. (Applause.)

I have been speaking more in the abstract. I am reminded of the story of a college professor who was very particular about his premises. He had just had a new cement sidewalk laid. The children were playing around in the fresh cement, drawing pictures and writing initials. The professor got after them and tried to run them off. One of the neighbors said, "Why, I thought you were very fond of children," and the professor said, "I am very fond of children in the abstract but not in the concrete." (Laughter.)

Now I am just going to make one concrete plea, and then I will sit down. It is to ask you to give your united support to a measure which has been mentioned here by one or two of your council, that is, the Physicians' National Committee for the Extension of Medical Service. We are very enthusiastic about it in Louisiana. We are making a campaign for contributions. In fact, just last week our local medical society gave us a substantial contribution for this cause. This committee is making a fight for you and for me. It is only through such organizations as this that we can hope to fight off this so-called socialized medicine. I think it has been largely responsible, at least the men who are at the head of it have been largely responsible, for shelving the original Wagner Bill, in place of which we are going to get some legislation which will not be nearly as obnoxious, if obnoxious at all. There is some dispute in organized medicine as to whether this new bill, which looks like it is coming through, will be helpful or not, but I want to tell you that we are for it, and we hope the great State of Texas, with its large number of doctors in organized medicine, will stand behind it. Again I thank you.

Dr. C. A. Miller, of Las Cruces, New Mexico, fraternal delegate from the New Mexico Medical Society, was then presented.

Dr. Miller: Mr. President, I am enjoying this meeting very much, and on behalf of the New Mexico Medical Society, I will invite the members of the Texas Medical Society to attend our meeting on May 27, 28 and 29. Thank you very much. (Applause.)

On motion of Dr. E. W. Jones, duly seconded, a recess was taken until 2:00 o'clock p. m., at which time the House of Delegates was called to order by President Reeves.

Secretary Taylor then presented the Report of the Committee on Health Problems in Education, as follows:

REPORT OF COMMITTEE ON HEALTH PROBLEMS IN EDUCATION

As Chairman of the Committee on Health Problems in Education, I wish to report that I have met and discussed with several members of the State Board of Health the flagrant commercialization of testing patients who have supposedly difficult hearing, with Audiotests and other kinds of Audiometers, by inexperienced operators; also the selling of hearing aids to patients with variable degrees of deafness, by commercial men who are inexperienced and had had no training whatsoever in diseases of the ear and their management. We also discussed the commercialization of reading instruments, such as the Ophthalmograph, Corneal-Reflexometer, Telebinocular, Visuascope, Projecto-Chart, Speech-Recording apparatus, Metronoscope, Flashmeter and other projection reading technique. Reading laboratory courses and short clinics, are already being given in some of the colleges of Texas, by teachers who are inadequately trained.

I would recommend that the Committee on Health Problems in Education be especially instructed to confer with members of the Texas State Board of Health and thoroughly investigate all agents who are commercializing on all forms of hearing and reading aids. We find that the pernicious practice of recommending and selling hearing aids to all classes of patients without consulting competent otologists or ophthalmologists exists on every hand. This is reprehensible, and detrimental to these ear and eye patients.

The State Board of Health has been in perfect coöperation with us in every way possible.

OSCAR M. MARCHMAN, Chairman.

The report of the Committee on Health Problems in Education was then referred to the Reference Committee on Scientific Work.

Dr. J. M. Martin then presented the report of the Committee on Cancer, as follows:

REPORT OF THE COMMITTEE ON CANCER

Your committee is pleased to report that through the efforts of the Women's Field Army of Texas, this has been the most successful year we have had in bringing the subjects of cancer prevention and control to the notice of a larger number of people.

Mrs. Volney W. Taylor of Brownsville, State Commander of the Women's Field Army, working under the auspices of the American Society for the Control of Cancer and the Cancer Committee of the State Medical Association of Texas, has been giving her entire time in an effort to organize the state, county by county. She has succeeded in covering 100 counties, providing each with a Captain and Lieutenants who are active in arranging meetings and securing speakers from their own ranks, and when needed from members of the medical profession in the counties where the work is being done, and in some cases even from other parts of the state.

As was to be expected in a new undertaking, many obstacles have confronted these women. In a few counties, after captains had been appointed, they resigned, making it necessary to contact others and start all over again. However, nothing has daunted these noble women, and the work of organizing the state is moving on.

Our doctors have been and are still willing to give freely of their time and knowledge in assisting the women in this fight against cancer. The present method of educating the people regarding the nature

of cancer, through the Women's Field Army, is bringing far better results than any former method.

The fact that many people are dying every year from this disease, and further, that women are the greatest sufferers, has inspired our women to take up the fight and leave nothing undone until every woman knows the truth about cancer prevention, its early diagnosis and proper treatment, and how to go about securing such relief when needed.

One committee meeting was held, in Austin, at which three of our members were present. Your chairman has attended three other meetings in Austin, at the request of Mrs. Taylor. Dr. George W. Cox, State Health Officer, attended these meetings, and has rendered valuable advice and assistance. He has expressed a willingness to coöperate with our committee at any time we can use him or members of his staff.

Thousands of pieces of literature pertaining to cancer prevention and early diagnosis, furnished by the American Society for the Control of Cancer, have been sent to the workers in the field, and through them to the people, where they will do the most good. Besides several silent motion pictures and still strips, the chairman of this committee has a sound film entitled "Choose to Live," produced by the United States Public Health Service and the American Society for the Control of Cancer, in which Dr. Thomas Parran, Surgeon General, United States Public Health Service, Washington, D. C., and Dr. C. C. Little, Managing Director of the American Society for the Control of Cancer, appear and discuss the subject of cancer prevention. This picture presents the subjects of early diagnosis and early treatment of cancer in a very convincing way, and carries conviction to all who are fortunate enough to see and hear it.

Now that cancer prevention, and early diagnosis and treatment are being stressed throughout the state, we are soon going to be faced with the proposition of furnishing some means for treating the indigent cancer case in Texas, of which there is now an ever increasing number.

Your Cancer Committee has taken up the subject of a free cancer hospital in Texas. We have had one meeting in Austin, with State Health Officer, Dr. George W. Cox, and his department, and have thoroughly discussed the bill passed by our Legislature in 1928. Finding this measure now inadequate, and in some parts obsolete, we have undertaken the job of formulating a new measure, one that will better meet the requirements of the cancer situation today. It will be presented to the Association at the Dallas meeting in May. We hope it will be approved. There is a crying need in Texas for a free cancer hospital. We believe the time is ripe to start a movement for one. We have machinery that can easily be put in operation to carry the project to success.

J. M. Martin, Chairman,
Sidney J. Wilson,
M. E. Lott,
A. A. Ross, Jr.,
Paul Brindley.

The report of the Committee on Cancer was then referred to the Reference Committee on Scientific Work.

Secretary Taylor then presented the report of the Committee on Transportation, as follows:

REPORT OF COMMITTEE ON TRANSPORTATION

As usually is the case, our committee has had no function except to select the official route to the annual session of the American Medical Association, which will occur this year in New York City, June 10-14. Originally, the principal purpose of this committee was to secure reduced rates for our annual sessions. The railroads now put on a regular summer rate which is below that usually accorded conventions, hence there is no purpose in that direction.

After due consideration, we have selected the Missouri-Pacific Lines from Texas to St. Louis, and the Pennsylvania Lines from St. Louis to New York, as the official route. We are suggesting the following schedule, beginning the journey on any chosen day, remembering that there will be activities through the 10th, 11th, 12th, and 13th:

Lv. El Paso	(T. & P.)	9:00 p. m.	June 7
Lv. Abilene	(T. & P.)	10:20 a. m.	June 8
Lv. Fort Worth	(T. & P.)	3:05 p. m.	June 8
Lv. Dallas	(T. & P.)	4:00 p. m.	June 8
Lv. Corpus Christi	(Mo. Pac.)	12:30 a. m.	June 8
Lv. San Antonio	(Mo. Pac.)	9:00 a. m.	June 8
Lv. Austin	(Mo. Pac.)	11:02 a. m.	June 8
Lv. Galveston	(Mo. Pac.)	10:30 a. m.	June 8
Lv. Houston	(Mo. Pac.)	12:30 p. m.	June 8
Lv. Palestine	(Mo. Pac.)	4:20 p. m.	June 8
Lv. Longview	(T. & P.)	6:40 p. m.	June 8
Lv. Texarkana	(Mo. Pac.)	8:35 p. m.	June 8
Ar. St. Louis	(Mo. Pac.)	8:30 a. m.	June 9
Lv. St. Louis	(Penn.)	9:15 a. m.	June 9
Ar. New York	(Penn.)	7:30 a. m.	June 10

The rail and Pullman fares from various points in Texas to New York, are as follows:

From	Round Trip Rail	Lower Berth One Way
El Paso	$103.20	$17.10
Abilene	82.75	13.95
Fort Worth	75.50	12.35
Dallas	74.20	12.35
Corpus Christi	88.80	15.25
San Antonio	85.30	14.70
Austin	81.70	13.95
Galveston	80.45	13.40
Houston	78.25	12.60
Palestine	73.55	12.35
Longview	69.90	11.85
Texarkana	65.85	11.05

Those who expect to make the trip by rail should lose no time in discussing the matter with representatives of the Texas and Pacific or the Missouri-Pacific, or any connecting road.

Our committee most respectfully represents that if our members will concentrate on the use of the roads here selected, they will provide themselves with good company. New York is a long way from most points in Texas, and good company on the way is highly desirable.

We would like to report further that the Missouri-Pacific and the Texas-Pacific roads have helped to defray the expenses of publicizing this movement by the purchase of liberal advertising space in the Journal of the Association.

Respectfully submitted,
Holman Taylor, Chairman,
D. M. Higgins,
M. L. Hutcheson,
H. V. Reeves,
C. C. McClure.

The report of the Committee on Transportation was referred to the Reference Committee on Reports of Officers and Committees.

Secretary Taylor: Dr B. L. Jenkins, a member of the Committee on Memorial Exercises, presents the report of his committee, as follows:

REPORT OF COMMITTEE ON MEMORIAL EXERCISES

Your Committee on Memorial Exercises has arranged for suitable memorial services to honor our dead. These services will be held on Tuesday, May 14, 1940, from 6 p. m. to 7 p. m., in The Grand Ballroom of The Hotel Adolphus.

The local committee on Memorial Exercises has provided beautiful music for the occasion, and the exercises will be held jointly with The Woman's Auxiliary to the State Medical Association.

The past year has recorded the death of 63 members of the Association, and 79 physicians who were non-members at the time of their death, many of the latter having been members during some portion of their professional lives.

It is hoped that the memorial services will be accorded a generous attendance.

Respectfully submitted,
Jno. M. Furman, Chairman,
B. L. Jenkins,
Jas. M. Campbell,
Wm. R. Moore,
L. E. Kelton, Sr.

The report of the Committee on Memorial Exercises was referred to the Reference Committee on Reports of Officers and Committees.

Secretary Taylor then presented the report of the Committee on Scientific Exhibits, as follows:

REPORT OF COMMITTEE ON SCIENTIFIC EXHIBITS

Your Committee wishes to make the following report:

The interest shown in this exhibit is greater this year than in previous years. This is made noticeable by the number of new exhibitors, and those seeking information as to the preparation of an exhibit for a year or so hence. The material offered for exhibition is of more than routine significance. The scientific study and original ideas displayed are worthy of study, and the exhibitors are to be commended for their diligent work.

The practice of offering awards has stimulated scientific study, and has produced new and original exhibits. The exhibits thus offered are in competition for these prizes. The award should, in the opinion of this committee, be stressed.

Respectfully submitted,
X. R. Hyde, Chairman.

The report of the Committee on Scientific Exhibits was referred to the Reference Committee on Scientific work.

Dr. T. S. Edwards, a member of the committee, then presented the report of the Committee on Medical Education and Hospitals, as follows:

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

During the year two members of the committee, Dean J. W. Spies of Galveston, and the Chairman, attended the annual session of the Association of American Medical Colleges held at Cincinnati, October 23, 24 and 25, 1939, and the Annual Congress on Medical Education and Licensure of the Council on Medical Education and Hospitals of the American Medical Association at Chicago, February 12 and 13, 1940.

The major portion of the program of the meeting of the Association of American Medical Colleges was devoted to a discussion of three topics, namely, Interneships and Residencies; Graduate Medical Training, and Student Health Service, while the program of the Annual Congress at Chicago was a more varied one, running through the whole gamut of medical education and licensure—the history of medical education, 1905 to 1940; selection of medical students; instruction of internes; graduate medical education; problems of licensure, etc.

The major concerns of present day medical education are the training and selection of applicants for admission to medical college, the instruction of internes and residents, graduate medical education and preparation leading to eligibility for certification by the various specialty boards. There remain, of course, individual school problems, such as financial support, curriculum, laboratory and clinical facilities, etc.

Preparation and Selection of Applicants For Admission to Medical College.—The material entering a medical college will naturally determine the product of that school. It is generally recognized that the college preparation for the study of medicine should be devoted to general rather than largely scientific education. The overemphasis on preparation in the sciences which has obtained in the past as a result of the requirements of medical schools, professional and licensing bodies, is being abandoned, and rightly so. It has served its purpose. The medical student needs only a basic knowledge of chemistry, physics and biology. The remainder of his college preparation should be devoted to obtaining as broad an education as possible in the time available. It must be realized that the student during his college training is preparing not alone for admission to medical college and the study of medicine, but equally so for the practice of medicine, and the duties and responsibilities of citizenship in the community in which he may locate. The two medical schools in Texas now have a minimum entrance requirement of three full years or sessions, of college preparation. Many of the applicants admitted have completed more than the minimum required college preparation.

The selection of students for medical study cannot be based alone on the amount of college preparation and scholastic record. The true success of a physician, and the public as well as the professional repute in which he is held, is determined by his character, personality, industry, reliability, judgment, resourcefulness, emotional stability and native ability, quite as much as by his technical skill and knowledge. The true evaluation of these qualities is difficult, yet they must be and are the serious concern of the Committee on Admissions of every medical college. Practicing physicians can render a service to medicine by exercising their influence whenever possible in directing into and recommending for medicine, only the inherently qualified and fit young man or woman.

Internships and Residencies. Much serious thought and consideration is being given to the educational phases of the interneship and residency. The undergraduate medical curriculum and interneship program form a continuous sequence and have a common objective. That all interneships now available do not offer equal educational advantages is evident. The effectiveness of any program of interne training is dependent upon the ability and teaching interest of the attending staff, the educational atmosphere or environment, and the completeness and thoroughness of the hospital service. Thus the active and intelligent coöperation of the hospital and attending staff is essential. The Association of American Medical Colleges, through its constituent medical college membership, is engaging in comprehensive study of the present facilities and educational programs for interne training, with a view in the course of time of formulating minimum educational standards of an acceptable interneship, and to prepare a list of hospitals meeting these standards.

Residencies are allied closely to interneships in all educational planning, yet they may best be considered as a phase of graduate medical education. This phase of medical education is receiving greater emphasis because of the requirements for certification of the various specialty boards. These requirements are scheduled to become effective in 1942. The minimum period of training for a specialized field of practice will be eight years, comprising the four year medical course, an interneship of at least one year, and not less than three years of a hospital residency. To develop a sufficient number of accept-

able residencies to meet the demands for this special training will be a real problem. This phase of medical education brings renewed and increased emphasis on the problems for students, hospitals and universities, of the increasing length and cost of medical education. Greater financial support for medical education in its entirety must be made available.

Hospitals.—The hospital facilities of Texas were thoroughly reviewed in a report of the Committee on Medical Education and Hospitals, made to the Association at its annual session last year. It is not believed that there have been any material changes in such facilities during the year.

Your committee recognizes that there are other problems confronting medical education, but to discuss all would carry this report beyond all reasonable bounds.

Respectfully submitted,
W. H. Moursund, Chairman,
Homer B. Allen,
T. S. Edwards,
J. W. Spies,
John T. Tucker.

Dr. Edwards: From the colleges over the United States there has arisen a movement that I would like to lay before you. It is that we get all of the affiliated states on the same line of internship; that we either adopt the four years in Texas, or the Board of Medical Examiners make another year of internship compulsory. We will have to have it, and that is the plea coming from different places, like California, Chicago, New York and other places. They want us to join in, as they are working with us. They want us on the same standard as they are.

Secretary Taylor then presented the report of the Committee on Revision of Constitution and By-Laws.

REPORT OF COMMITTEE ON REVISION OF CONSTITUTION AND BY-LAWS

This committee had planned to review the Constitution and By-Laws as it stands today, with the idea of justifying all of the amendments made since the last edition, but the State Secretary has advised us that there are entirely too many amendments to consider until a new edition can be set up. He further advises that the reason there has been no recent edition of the Constitution and By-Laws, is that there have been constantly pending so many proposed amendments to either or both, that a needless repetition of the expense involved would be occasioned. We agree that this is a potent reason for delay, but would respectfully suggest that a new edition be gotten out immediately following the close of the present annual session of the State Association, and that the incoming Committee on Revision of Constitution and By-Laws be directed to check and approve the same, a procedure we think is entirely in order, in view of its protective character.

The President has asked our committee to prepare such amendments to our Constitution and By-Laws as will be necessary to the creation of a proposed "Council on Postgraduate Medical Education." It is our understanding that the Executive Council of the Association has approved of the suggestion of the President that this be done, and the details involved have been transmitted to us. We have prepared the amendments in accordance with instructions, and they are herewith submitted:

Amendment to the By-Laws Setting Up a Council on Postgraduate Medical Education.—We find that it will not be necessary to amend the Constitution in order to carry out the instructions of the President and the Executive Council in this regard. We therefore move that

Chapter IX of the By-Laws be amended by adding a new Section 7 (page 21, 1937 Edition), as follows:

"Sec. 7 (a-4). The Council on Postgraduate Medical Education shall consist of five members. The members of the first Council shall be appointed for one, two, three, four and five years, and thereafter the President-Elect shall appoint to fill vacancies created by expiration of term of office. The Chairmanship of the Council shall be determined by the appointive authority when the term of office of the incumbent chairman expires, or the office for any reason becomes vacant. These appointments shall be confirmed by the House of Delegates, and shall be considered at the time of election of officers. The President and Secretary of the State Association and members of the following committees shall be ex-officio members of this Council: Cancer, Mental Health, Fractures, Maternal and Child Health, Tuberculosis, Venereal Diseases, Industrial Health, Malaria, and Pneumonia Control. It shall be the duty of this Council to consider all matters of interest in connection with the re-education of the medical profession, upon instructions of this House of Delegates or its own initiative, and to coöperate through appropriate groups with the State Health Department in furthering the cause of public health. The ex-officio status of the several committees incorporated in this Council shall not interfere with their several and stated duties and obligations. This council shall have authority to consult with or act in conjunction with other organizations and groups in the accomplishment of its purposes, as here established."

Re-number Sections seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen and seventeen of Chapter IX, to allow for the numerical interposition of the above mentioned Section 7 of the Chapter.

Respectfully submitted,
N. D. Buie, Chairman,
J. H. Caton,
Hines Clark,
A. L. Ridings,
Harry L. Locker.

President Reeves: This report will be referred to the Reference Committee on Scientific Work as far as policy is concerned, and to the Reference Committee on Amendments to the Constitution and By-Laws as far as the form of the proposed amendments is concerned.

Secretary Taylor: Pursuant to the request of a member of the Advisory Committee to the Woman's Auxiliary. I am pleased to read the report of that committee:

REPORT OF THE ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY

The Advisory Committee to the Woman's Auxiliary to the State Medical Association has functioned by conferences with, and advice to the Auxiliary as circumstances have demanded. The committee met with the ladies of the Auxiliary at its Board meeting in Dallas. The several members of our committee have been consulted from time to time by various members and officers of the Auxiliary, and we hope our advice has been of value.

We would take this occasion to congratulate the Auxiliary on its work, notable features of which are, primarily, the extension of the organization to 112 counties and to many additional counties by district organizations. Further, the Auxiliary recognizes that acquaintance and friendship are the strongest factors that can be utilized in securing coöperation in any undertaking, and these factors have been made the groundwork for the organization.

This organization, by reason of its large and interested membership, is able and is destined to be of material and valuable assistance to the State Medical Association in attaining its objective. While Texas has the second largest, and our local pride makes us think the best, State Auxiliary, there are similar organizations in 38 states, and these will be of benefit to each State Medical Association, and the combined power of the several State Auxiliaries, and the Woman's Auxiliary to the American Medical Association, will doubtless assist in solving our national medical problems.

Respectfully,
S. H. WATSON, Chairman,
J. G. MCCALL,
J. H. MCCRACKEN,
H. R. DUDGEON,
J. S. PETTY,
W. G. PHILLIPS.

The report of the Advisory Committee to the Woman's Auxiliary was then referred to the Reference Committee on Reports of Officers and Committees.

Dr. Guy F. Witt, a member of the Committee on Mental Health, then presented the report of that committee, as follows:

REPORT OF COMMITTEE ON MENTAL HEALTH

Your Committee begs leave to make the following report:

First, we have had several contacts with representatives of the State Department of Health having to do with mental health, and have been furnished a copy of their actual and proposed program, which we hereby endorse.

Second, we recommend that the necessary steps be taken to build the Psychopathic Hospital in Dallas which has already been provided for by law. The Psychopathetic Hospital at Galveston has been doing excellent work, but is unable to handle all the applications. The need for another Psychopathic Hospital is urgent.

Third, we recommend that the President, or House of Delegates, appoint a special committee the duties of which shall be, first, to study the question of commitment to our State Hospitals, which has always been unsatisfactory and which has been changed at least twice and declared unconstitutional, and consult with the Attorney-General with the idea of recommending a measure which will be constitutional or, if necessary, to a constitutional amendment, to make constitutional the proper bill; second, this committee to recommend a bill creating a State Department of Mental Health similar to that which exists in other States, this department to have complete control of all state activities that have to do with mental health, divorcing these duties from those of the Board of Control, the department to be in charge of a properly trained specialist.

We feel that a special committee should be appointed for the above purposes, and that the committee be empowered to introduce the necessary bills before the Legislature. This will require considerable study of our institutions and their various problems.

Respectfully submitted,
WILMER L. ALLISON, Chairman,
P. M. BASSEL,
GUY F. WITT,
T. M. DORBANDT,
JAS. GREENWOOD, SR.,
W. A. SMITH.

The report of the Committee on Mental Health was then referred to the Reference Committee on Scientific Work.

Dr. Charles S. Venable then presented the report of the Committee on Fractures, as follows:

REPORT OF COMMITTEE ON FRACTURES

Your Committee has prepared again this year, as a scientific exhibit, a demonstration of:

1. The Application of Plaster of Paris;
2. Fracture of the Spine;
3. Fracture of the Femur;
4. Fracture about the Elbow.

These demonstrations are to be held for three-hour periods on Monday, Tuesday and Wednesday, May 13th, 14th and 15th.

The Committee wishes to express its appreciation to several members of the Association for their assistance as demonstrators, which has made this exhibit possible.

In compliance with the authority given by the House of Delegates at the last meeting, your Committee has prepared and submitted for publication, a series of articles on first aid. These releases have appeared in the daily press of Texas. This has been possible through the generosity and humane interest of Mr. Frank G. Huntress, President of the San Antonio *Express and Evening News*, who has supplied both the incentive and material, gratis, to the press of the State.

Appreciation is also expressed to the Texas Highway Commission and the Texas Public Safety Department, for their joint sponsorship of these articles.

Your Committee finally recommends that a resolution be passed by the House of Delegates as an expression of appreciation and gratitude of the State Medical Association to Mr. Huntress for this service, and that an embossed copy of such a resolution be presented to him.

Respectfully submitted,
C. S. VENABLE, Chairman,
B. L. SCHOOLFIELD,
M. B. STOKES,
H. S. RENSHAW,
R. G. BAKER.

Dr. C. R. Hannah then presented the report of the Committee on Maternal and Child Health, as follows:

REPORT OF COMMITTEE ON MATERNAL AND CHILD HEALTH

The Committee on Maternal and Child Health of the State Medical Association, acting in its advisory capacity to the State Health Department as a whole and the Division of Maternal and Child Health in particular, has met twice during the year, and the chairman has represented the committee on several other occasions.

The committee has reviewed the activities and the plans of the division, and wishes to commend the State Health Officer on the program, the constant cooperation given, and the efforts to select the personnel entirely on a merit basis.

In many matters relating to the public and other agencies, we believe the State Health Department can serve organized medicine to real advantage. We believe this effort to serve is being made. We particularly commend the efforts directed toward coordination of the activities of every agency dealing with maternal and child health. We note with pleasure the approval that these efforts have received from other agencies, such as the Texas State Teachers Association, the Department of Education, and the State Parent-Teacher Association. We believe such coöperation will work to the advantage of both these groups, to the State Medical Association and to the mothers and children of Texas. We believe that coöperation with the State Health Department will lead to efficient, economical administration of public health in Texas.

We have worked with the other committees of the Association, on postgraduate training for physi-

cians, and can report increased interest and coöperation in this field.

We recommend:

1. That the State Health Department be given recognition for its attitude of coöperation and service.
2. That the entire medical profession take cognizance of these activities, and obtain first hand information of public health activities by visiting services and observing the work and by inviting explanations.
3. That the present plan of postgraduate medical education be continued along lines suggested by the department.
4. That the committee be continued, with some overlapping of terms of members.

Respectfully submitted,

CALVIN R. HANNAH, Chairman.

President Reeves: This report will be referred to the Reference Committee on Scientific Work.

At this time we are honored by having with us a former president of this Association, a past president of the American Medical Association and a man who is probably doing more outstanding work at this time in national affairs, with relation to the medical profession, than any other person. It is now my pleasure to present to you Dr. E. H. Cary. (Applause.)

ADDRESS OF DR. E. H. CARY

Since we met in San Antonio last year, there have been a great many things that have happened so far as your representatives are concerned. Those of us who have been sent as delegates to the A. M. A. have been to the forefront of the activities which seem necessary to protect the practice of medicine as we now understand it. I feel that you have possibly kept up with all of this. I am quite sure that you did keep up with the St. Louis meeting, and if you did you had an opportunity to read the twenty-two points made by the House of Delegates, which I think represented sound philosophy and a very sound position so far as American medicine is concerned.

Following this, some of us represented you at Washington, and I think it is generally conceded that, regardless of the attitude of the Sub-Committee of the Senate, we left an impression which radiated through the Senate and possibly the House. So far as Washington was concerned, I think medicine is in a better position with our national legislators than could have been expected if that meeting had not taken place. As a matter of fact, when we were in St. Louis we were under the impression that we were pretty thoroughly discredited in Washington. I am quite certain that we can say that we changed the general attitude of the legislators in Washington, and that medicine is in a very much stronger position. The Wagner Bill was discredited, regardless of the fact that the Sub-Committee published practically, only the things which were favorable to its views. If you have looked into it at all, you will find that what was said by Dr. McCormick, Dr. Underwood, and others who represented largely the public health point of view, was published, and not what was said by those representing American medicine. I look upon that as rather an unfair presentation. It certainly was unfair to American medicine. But regardless of the Sub-Committee's attitude, I think the impression made by the testimony as a whole helped American medicine throughout this country.

It wasn't a great while ago that the President decided that maybe there was something yet that could be done for the public health that would be favorable to his administration. He sent for the original committee, of which I happened to be a member, which was appointed by the House of Delegates of the A. M. A., and took up with us the question of hospitalization, and discussed the feasibility of building some fifty hospitals. We spent a night and a day preparing for that. We had a very pleasant meeting with the President, and I shall not go into details except to say that as the President unfolded his plans it seemed to us he had abstracted from the Wagner Bill a feature which concerned American medicine, that is, the hospital feature, and that he had nullified the substance of the Wagner Bill by providing that there would be no subsidies anywhere to take care of these hospitals; that the people would have to want a hospital, they would have to need a hospital, and they would have to be prepared to take care of a hospital, before they would get one. That struck us as a perfectly sound position, whether or not he be driven away from it a little later on. At any rate it seemed to us that he was treating the Wagner Bill very much like the negro in Holman Taylor's story treated the catfish. He said, "Be still, catfish, I ain't gwine to do nothing to you but gut you." And so, he thought he had done pretty well by the Wagner Bill.

The impression has gained ground, however, that Senator Wagner looks upon this project not as a point against the Wagner Bill, but as making that measure possible if the new law goes into effect; that it rather opens the road to further legislation, in which Wagner and his group are intensely interested. Be that as it may, I am inclined to think that American medicine could not safely object to a hospital being built anywhere in the United States where it can be proven that it is needed. All we can say is, Write into that bill that which we have not been able to get into the bill, that the advisory board that is a part of the bill have some authority, and be able to say whether hospitals shall be built.

Now, I am sorry to say it, but we just can't trust the U. S. Public Health Service to write bills for us. In some way they will fix it so that they have full authority and we none, or little. Then we must write a substitute, or an amendment, to provide for true coöperation, and get it incorporated in the measure. So, we have come to the point where, unfortunately, we read in the papers of the terrible situation in Europe. It seems to me that American medicine in all probability will have a little less to contend with when the country has more to contend with.

Last September I was asked over the telephone from Chicago to become chairman of the National Physicians Committee for the Extension of Medical Service. We went soon after to a meeting of the editors and secretaries, at Chicago, and at that meeting the now well known platform of the American Medical Association was presented, and the facts related to the National Physicians Committee, as far as they were known, were presented. The matter was fairly well discussed. There was very slight objection. If I could point to any objection at all, I would say that the objection came largely from the source that it usually comes from. They did not quite see what was going to happen. Now I want to speak just a few moments about this National Physicians Committee, because I think you would like to know about it.

The National Physicians Committee was created to do something which apparently the American Medical Association could not do. Many is the time my wife has said to me, "Why don't you doctors do so and so," and it would be something that the American Medical Association could not do or something that they could not follow up. I happened to have this little pamphlet, "The Priceless Heritage," and let her read it. She said, "That is what I have been talking about all these years. Why didn't you doctors do that a long time ago?" That is the thought of a laywoman who happens to be in-

terested in the medical profession. She hates to see the medical profession attacked in so many places, and apparently defending itself only among its own members.

The National Physicians Committee was created to do something in a way that the American Medical Association could not do. The A. M. A. has been under constant surveillance. Revenue officers have been looking into their proceedings, all of their revenue and expenditures, trying to determine whether there is a basis for taxing the A. M. A., as a trade institution, or this or that. And what would such a tax mean? It would mean about a hundred thousand dollars a year. And what would that hundred thousand dollars a year tax do to the A. M. A. It would certainly make it more difficult to publish all of the scientific journals that it publishes, to do all of the many things that they do, all in the interest of the people. And so, the A. M. A. has been on a tight rope to the extent, that it had to be more and more careful not to be classified as active in legislation and or propaganda, but, instead to stand so erect as to fall backward. And so, this National Physicians Committee was created to represent as nearly as possible what the A. M. A. stood for, to back its platform, and to bring to the people of this country all of the information that it can, which would be worthwhile and which would possibly change the attitudes even of some members of the medical profession. There are two great political parties in this country. Both of them are going to write platforms. So far, we have been able to stave off any really harmful legislation, but if there is any one opportunity left to make a political football of medicine, it is to write it into the platforms of these two parties. It is up to the medical profession to try to prevent that. I wonder how many of you have received copies of the advertisement that will go into the *Saturday Evening Post* on June 22? It is a four-tone, double page advertisement, inviting the people who read the *Saturday Evening Post* to send for our very persuasive and informative literature. The ad will appear about a week before the Republican party writes its platform. And then, just a week before the Democratic platform is written, another double page advertisement will be published in the *Saturday Evening Post*. These two advertisements cost us $49,000.00. Over 5,000,000 of these have already been distributed among our doctors. The doctors of this country have been more or less coöperative. Over 117,000 of them have expressed their interest, and many have made contributions to the committee. There have been other contributions as well. We soon will have spent, with the two advertisements mentioned, something around $150,000.00, and none of it came from the A. M. A. This is not just another committee, gentlemen. This is not a committee like the notorious 430, which is an isolated committee representing 430 physicians. We feel that we represent the 115,000 doctors who belong to the American Medical Association, and if we don't represent them we ought to find it out mighty quick and quit.

I have told you all of this not for the purpose of stimulating you to give gifts, but to let you know that, regardless of the changes that may take place because of the occurrences in Europe, American medicine is on the spot at least in so far as a certain group of propagandists are concerned. Indeed, it has been on the spot with such people for many, many years, and they will not let up until they have accomplished what they started out to accomplish. The only people who have been able to deny them that first great step in socialism, the only group that have ever been able to fight them and stop them, is the medical profession. (Applause.)

I would like to call attention to the last copy of *Nation's Business*. Read it. You will see there one of the finest dissertations on this whole subject that you would want to read. It is as clever an analysis as can be presented. This magazine goes to something like 500,000 business men of this country. They give the medical profession full credit for being the only group that has had the nerve, that has had the guts, and is still able and willing to fight that group that infests Washington, and are more or less represented by the welfare workers of this country, and the dear ladies, very often, who know nothing about it until they are told by our auxiliary. They give us full credit, and I want to say to you that this National Physicians Committee is not likely to go without tongue if we continue the fight as it has been begun. Thank you. (Applause.)

President Reeves: It goes without the saying that this is the most instructive and important message that this House of Delegates will hear during our entire meeting. Our great regret, Dr. Cary, is that every member of the Association could not have heard you. That is what we need. That is the kind of gospel we need to hear preached.

Secretary Taylor then presented the report of the Committee on Tuberculosis, as follows:

REPORT OF COMMITTEE ON TUBERCULOSIS

Throughout the year your Committee on Tuberculosis has urged the committees of county societies to coöperate in the tuberculin testing of school children, and in every move toward the further education of members of the medical profession and laymen concerning tuberculosis.

Our Committee has furnished speakers to the State Health Department for its Refresher Courses in tuberculosis, and has coöperated with that Department in urging county societies to take advantage of these courses.

We have collaborated with the tuberculosis section of the State Health Department in the preparation and distribution of its excellent brochure on "The Tuberculin Test," and would urge the members of the profession who have not done so to procure copies of this booklet and study them carefully.

We have also coöperated with the Texas Tuberculosis Association in every way possible, and would express our appreciation of the splendid work which has been done by this organization, and by the State Health Officer, Dr. Cox, and by Dr. Howard Smith, head of the Department of Tuberculosis in the State Health Department.

May we hope that the effectiveness of all the agencies engaged in tuberculosis work in Texas increases as the years come and go.

Respectfully submitted,

R. B. Homan, Chairman,
H. F. Carman,
J. B. White,
W. D. Anderson,
Sim Hulsey,
C. J. Koerth.

The report of the Committee on Tuberculosis was then referred to the Reference Committee on Scientific Work.

Secretary Taylor then presented the report of the Committee on Industrial Health, as follows:

REPORT OF THE COMMITTEE ON INDUSTRIAL HEALTH

The Committee on Industrial Health of the State Medical Association begs leave to submit the following recommendations to the House of Delegates:

1. That the fact-finding investigation being carried on by the Division of Industrial Hygiene of the Texas State Department of Health be continued, and that at the same time a medical survey be made

to determine if these hazards are actually producing disease of any kind to men engaged in industry. An engineering survey should also be made, and the personnel making these investigations should consist of qualified doctors and engineers.

2. That the efforts being made to focus the attention of industrialists on a program of health conservation and health promotion be increased. Such efforts should be directed not only toward the engineering and medical control of occupational health hazards, but toward health conservation and health promotion in its broader sense.

3. That the State Medical Association take necessary steps or action to see that each and every County Medical Society is advised of the activities of the Committee on Industrial Health and of its recommendations, and that they be instructed to have their members recognize the hazards associated with occupation, and recognize the importance of more information, more detailed records, and more accurate information; that they report every case they see, either a private case or a company case, suffering from any occupational disease, and that these reports be filed just the same as birth and death certificates, with some agency created to receive and record such information.

4. That necessary steps be taken to impress all practicing physicians throughout the state with the importance and need of filling out death certificates completely and specifically in order to show the relationship, if any, of occupation to mortality.

5. That a definite effort be made to contact employers and insurance carriers to see if they would be willing to assist in securing legislation that would include occupational diseases under the Compensation Law.

6. That the State Medical Association use whatever steps are necessary to make employers hazard conscious, through public health addresses, speakers bureaus, etc.

7. That the State Medical Association investigate and take necessary steps to control the rapidly increasing practice of rendering first aid and subsequent treatment in industry, for supposedly minor injuries, by employers who have received certificates of proficiency in the administration of first aid, as such practice is a direct violation of the Medical Practice Act, and frequently results in serious complications causing prolonged disability, loss of members and life. It seems to this committee that first aid should not be intended to serve as a substitute for medical treatment, and that it is permissible only when the necessity for such is urgent and when the services of a doctor are not available within a reasonable length of time.

8. That all physicians and surgeons interested in occupational diseases and industrial health in general be encouraged to affiliate themselves with some organization endeavoring to promote a better understanding of such subjects through programs, papers, and discussions.

9. That the State Medical Association recommend that the curriculum of the public schools of this State be modified to include more public health and individual hygiene subjects.

Ross Trigg, Chairman,
F. E. Felder,
Hall Shannon,
H. H. Cartwright,
Carl A. Nau,
W. P. Lowry.

The report of the Committee on Industrial Health was then referred to the Reference Committee on Scientific Work.

Dr. J. F. McVeigh then presented the report of the Committee on Malaria.

REPORT OF THE COMMITTEE ON MALARIA

This committee has been in existence only one year, having been established immediately prior to the meeting of the State Medical Association in 1939. The purpose of this committee, as the committee itself understand it, is to act as a liaison body or intermediary agent between the Malarial Division of the State Board of Health and organized medicine in Texas. The committee has assumed that its aim shall be to foster, secure, and maintain coöperation between these two agents, with reference to the malaria situation, giving sanction to those activities of the Public Health Division on malaria it may deem wise, and advising against those activities of which it does not approve. On the other hand, the knowledge gained by the public health authorities may, through this committee, be brought to the attention of the practicing physicians of Texas, thereby giving the profession a clearer knowledge of the problems in malaria control.

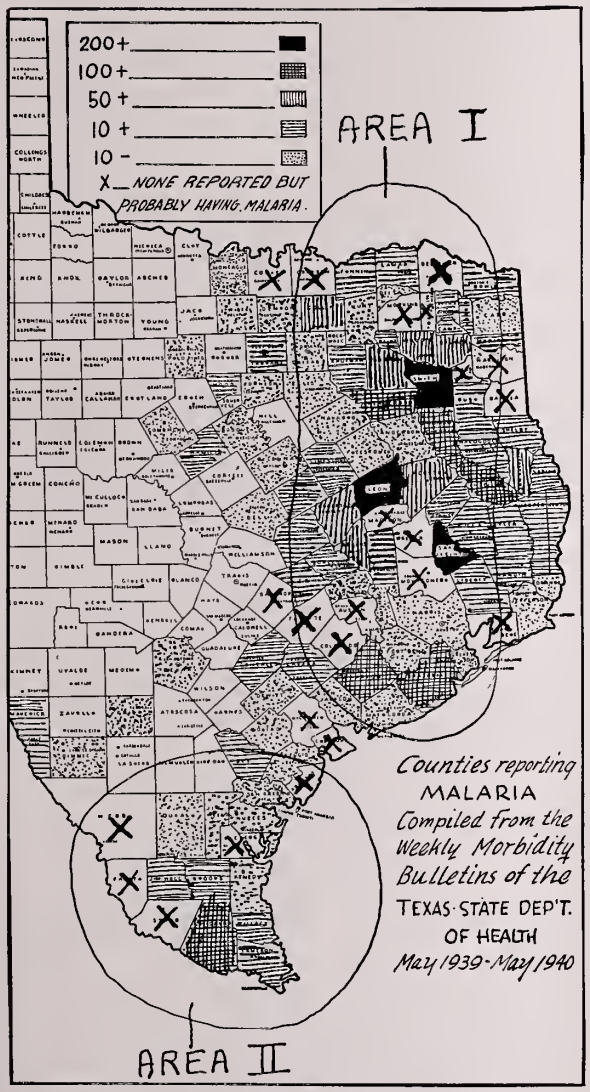
Objectives: Early in the life of this committee it was felt that the primary objective should be education, so far as both the public and the physician are concerned. Along the lines of education of the public there was prepared by the Director of Malaria Investigations, a poster entitled "Life, Stages, and Development of Mosquitoes." This poster was endorsed by our committee, and ten copies were sent originally to each of the 129 county societies in the state. In addition to this group of posters, 1,025 copies were requested and sent to 85 county medical society members and schools. In addition to the poster, two bulletins, one entitled "The Life and Habits of Mosquitoes," and the other "Mosquito Control Measures," were requested and sent to various county and city health workers, and schools for use in classwork. Three thousand copies of each of these bulletins were thus distributed. The posters, with bulletins, were largely requested by the secretaries of the various county medical societies, and numerous letters were received from the secretaries indicating their approval and coöperation.

Under the head of education, so far as the physician is concerned, your committee approved two symposiums, which were recommended to the Committee on Postgraduate Activities, which symposiums were made available to the various county societies. The purpose of these was to acquaint the practicing physicians with malaria control and therapy. Symposium No. 1 was by Dr. D. H. Lawrence, Austin State Hospital, Austin, Texas, and was entitled, "Malaria Therapy and Its Modern Day Use." Symposium No. 2 was by Dr. C. P. Coogle, Director of Malarial Investigation, Austin, Texas, (or some physicians in the district in which the discussion is desired), was entitled, "The Diagnosis and Treatment of Malaria, Including Malaria Microscopy." To date, the committee on education has not made any specific request for malaria lectures. In addition to these symposiums, there has been prepared a series of colored slides which your committee believes should be of great interest and value to the medical profession in Texas. These slides concern the development and infection of mosquitoes and the technique of their use in malaria therapy. These slides have just been completed and your committee thought them to be of such value that it has asked for a daily showing thereof at the meeting of the State Medical Association in Dallas.

This committee feels that the future objectives of the Committee on Malaria should be toward a further elaboration of the education of both the physicians and the public. It feels that so far as the control of malaria is concerned this educational material, as indicated above, should be brought more emphatically to the attention of county medical societies located in the malaria districts. In addition to this, it believes

that since most of the malaria smears, particularly in these districts, are examined by laboratory technicians, a refresher course should be conducted in the staining and studying of malaria smears, and that a standardized technique of malarial microscopy be established; and that finally a recognized method of treatment of the various forms and stages of malaria, including carriers, be established.

Attached hereto is a map indicating those counties reporting malaria during the past year. It is readily seen that most of the malaria in Texas is contained in the area marked No. 1, which includes a group of counties bounded by the Brazos River, the Sabine River, and the Red River, and area No. 2, including five or six counties, located in the extreme southern tip of the Valley. Your committee believes that future membership on this committee should be drawn from these areas, and so recommends.



Your committee feels that it has accomplished very little during the year of its existence, but it feels that it has learned a great deal about the malarial situation, and is definitely of the opinion that a great deal can be accomplished. For many weeks during the past year malaria stood at the top of the list of reportable diseases. A glance at the map will indicate that there are many counties not reporting cases of malaria which certainly must have had them. It is evident that there is a great deal more malaria than is indicated by the weekly reports of the State Health Department.

In conclusion, we would urge that the county societies in the malaria districts call upon the Committee on Postgraduate Medical Education for the two symposiums mentioned above, and avail themselves of all the facilities to better enable them to control malaria within their districts, and that all county medical societies should be acquainted with the work being done in the field of malaria therapy, both by the State Health Department and the Austin State Hospital, so that the practicing physician may make use of the available material and resources. This latter should be called to the special attention of the Committees on Mental Hygiene and Venereal Diseases, for their coöperative action.

Respectfully submitted,

Jos. F. McVeigh, Chairman,
J. N. White,
J. E. Robinson,
B. W. Works,
W. T. DeTar,
C. P. Coogle.

Dr. McVeigh: Dr. Robinson, of Temple, objected to that portion of the report with reference to the training of technicians in refresher courses. He does not feel that this is needed.

The report of the Committee on Malaria was then referred to the Reference Committee on Scientific Work.

Dr. J. Harolde Turner, a member of the Committee on Venereal Diseases, then presented the report of the Committee on Venereal Diseases, as follows:

REPORT OF COMMITTEE ON VENEREAL DISEASES

The committee held its organization meeting during the Annual Session in San Antonio. At this time plans were discussed for the ensuing year with the President-Elect, Dr. L. H. Reeves, State Health Officer Dr. George W. Cox, and a regional representative of the U. S. Public Health Service. Committee members present were: Drs. S. J. R. Murchison, Fort Worth; J. Harolde Turner, Houston; Edward White, Dallas, and A. M. Clarkson, Director of Venereal Disease Clinics, Austin.

During the past year meetings have been called at Dallas and Fort Worth. At the meeting in Fort Worth, President L. H. Reeves and Secretary Holman Taylor were present and took active part in the discussion. It is considered worthy of mention that at each meeting of the committee all members were present. In addition to these regular meetings, numerous informal conferences between the chairman and representatives of the State Department of Health have been held in Fort Worth.

Throughout the year it has been the aim and idea of the committee to strengthen the fifth objective of the Platform of the American Medical Association, namely: The provision of medical care for the medically indigent, with purely local determination of needs and local control of administration. The State Department of Health has coöperated to the fullest extent with county medical societies as will be outlined later in the provisions for the establishment of V. D. Units.

The committee has communicated with the secretaries of all county medical societies of the state, and has recommended that each society appoint a Committee for Venereal Disease Control, to serve in an advisory capacity where treatment clinics are already established, to assist in their organization, and to supervise the distribution of drugs, particu-

larly in rural areas. In other words, it is squarely the responsibility of the local society to determine how far the socialization of medicine will proceed, through its own administration of a health program already thoroughly established and, apparently, here to stay.

Many counties have complied with our suggestion and have set up local regulatory committees. It is recommended that these committees be continued, and that councilors provide for further organization within their councilor districts.

Very few complaints have come to the committee regarding the operation of Venereal Disease Clinics. Where such complaints have been brought to the attention of the proper authorities they have received prompt attention. Here again is emphasized the importance of the local V. D. Control Committee.

The committee after due study recommended to the Board of Councilors and the Committee on Postgraduate Medical Education, that refresher lectures be conducted on gonorrhea and syphilis. Expense of these courses is to be defrayed by the State Department of Health, with lectures provided by the committee. Following approval by the Board of Councilors and Committee on Postgraduate Medical Education, a Speakers Bureau, composed of urologists and dermatologists over the entire state, has been established. To date, such courses have been conducted at El Campo, El Paso, and Luling.

Since the passage of the Venereal Disease Control Act in 1938, most of the original nine points in the program have been in process of attainment. However, it is regrettable that the provisions pertaining to the requirement of blood tests and treatment for expectant mothers, candidates for marriage, and in the course of complete physical examinations, have become ammunition for some of our brethren on the outer fringes of medicine. These ill-advised laymen have carried on wordy newspaper campaigns for the eradication of syphilis, with high-lights on our own shortcomings in that regard.

In the first year of operation, *i. e.*, from July 1, 1938, to June 30, 1939, $128,950.00 in federal funds were allocated to the Texas State Department of Health, under the provisions of the Bulwinkle Bill. Of this amount, $79,000.00 was expended. The second year, $244,442.00 in federal funds were allocated to Texas. Practically all of this amount, plus the unexpended balance of $50,000.00, will have been expended at the end of the second fiscal period, June 30, 1940.

For a time this year it seemed that Congressional economy measures would cause a marked curtailment in the national Venereal Disease Control Program. However, present indications point to a total appropriation of $5,000,000.00, as compared with a contemplated allocation of $3,000,000.00 for this purpose. This probably means that Texas will receive approximately the same grant as last year.

During the first year of operation, nineteen cities and counties were given assistance, with the approval of local county medical societies. The second year, an additional twelve localities were given assistance, and funds withdrawn from one, at the request of the local medical society. An increased amount of funds was given in the larger cities due to increasing case loads beginning the first of the second year.

At the present time funds are allocated on thirty-one budgets. In some instances local funds are supplied by the city, in others by the county, and in some by a combination of city and county governments. Approximately fifty clinics are operating at the present time through these thirty-one budgets, although some of these are small and serve mainly the Negro and Mexican population.

Ninety rural or semi-rural counties are supplied drugs—with local control of distribution. This latter point cannot be over-emphasized in its importance and potentialities.

Fifty-three per cent of the total number of medical societies have approved the Venereal Disease Control Program and are operating clinics or receiving drugs.

Clinics are organized or given assistance according to the following procedure: (1) Approval of county medical society; (2) director of clinic approved by county society; (3) local financial participation, with local arrangements for clinic space and equipment, and, if possible, sero-diagnostic service furnished by local private laboratories; (4) a yardstick or standard of medical indigency for admission to the clinic, acceptable to the county society; (5) social service records and investigations as to patient income to be maintained; (6) case holding and contact investigations of infectious cases to be carried on.

Unless the county society wishes otherwise, local physicians are employed as part time clinicians, and conduct the administration of treatments. In most instances, these physicians have had special training in syphilology, urology, or dermatology.

In our present Venereal Disease Control Program, the disease at which this campaign is chiefly aimed is syphilis. The other, more transient diseases, are treated as a matter of necessity and as a means of education of the public.

The treatment phase of the control effort is the responsibility of the private practitioner of medicine. Only by thorough and efficient treatment of the individual syphilitic patient can the infectiousness of the individual case be controlled or ended. The transmissibility of infection from patient to others, with far reaching results, is a public health problem. In this phase of control, efforts are made to keep the patients coming for treatment, and likewise to trace all possible contacts; source of infection, familial, and sexual exposures. With proper division of responsibility, this campaign should proceed in a satisfactory manner and, in most instances, this has been the case.

It is suggested that some perpetuating method be adopted for the appointment of our committee. It is our opinion that the important character of the work as carried on at present merits the retention of one or more members for overlapping periods, in order to avoid the inevitable delay of entirely new personnel familiarizing themselves with the nature of their duties.

Respectfully submitted,
S. J. R. Murchison, Chairman,
Edward White,
J. Stewart Cooper,
J. D. Hall,
J. Harolde Turner,
A. M. Clarkson.

The report of the Committee on Venereal Diseases was then referred to the Reference Committee on Scientific Work.

Dr. Felix P. Miller then presented the report of the Committee on Post Graduate Medical Education.

REPORT OF THE COMMITTEE ON POST-GRADUATE MEDICAL EDUCATION

At the May, 1939, Meeting of the American Medical Association, in St. Louis, Dr. W. D. Cutter, Secretary of the Council on Medical Education and Hospitals, speaking before the Associated State Committees on Postgraduate Medical Education, said:

"In some cases a Department of Health has carried the whole responsibility of such graduate courses without coöperation of the State Medi-

cal Society. If Federal Security money is to be expended in education programs in other states without any support from the State Medical Society, it would mean in the long run that the control of the activities of the medical profession would tend to pass to governmental agencies."

He advised:

"that we should carry a message back to the organizations which we represent, that it is vital that the State Medical Societies assume a position of leadership in directing programs for the education of physicians. Funds may be obtained from the Federal Government if a state society assumes responsibility; medical societies should assume and retain control of this educational program and not let it slip out of our hands."

Eighteen states were represented at that meeting, as follows: Arkansas, Illinois, Indiana, Iowa, Maine, Massachusetts, Michigan, Nebraska, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Tennessee, Utah, Washington, D. C.

"The Associated State Postgraduate Committees" is a voluntary association of State medical society postgraduate committees, organized for the purpose of assisting each other in furthering postgraduate education in the medical profession of the United States. It is recognized that ways and means of keeping the practicing physician abreast of the advances in medicine is a public duty of the medical profession. The Associated State Postgraduate Committee seeks to help discharge this duty in the best possible manner, by mutual exchange of information and talent. It will coöperate with the Council on Medical Education and Hospitals of the American Medical Association, and all other special organizations composed of members of the American Medical Association, as well as with federal, state and other agencies or persons. All members of the postgraduate committees of the State Associations are eligible to membership.

It was in keeping with Dr. Cutter's advice that President L. H. Reeves called a meeting of this committee in Dallas, February 17, 1940, to consider Intramural Postgraduate Medical Education. Those present at the conference were: Drs. L. H. Reeves, President; Holman Taylor, Secretary; Felix P. Miller, Chairman of the Committee on Postgraduate Medical Education; Calvin R. Hannah, Chairman of the Committee on Maternal and Child Health; M. L. Wilbanks, Chairman of the Board of Councilors; W. H. Moursund, Dean of Baylor Medical School; Curtice Rosser, member of the committee on Postgraduate Medical Education, and J. M. Coleman, State Health Department. Dr. John W. Spies, Dean of Texas University Medical School, who could not be present, was represented by a letter.

The subject of the discussion was whether an intensive one month's course in Pediatrics and Obstetrics at the two medical schools was feasible. Dr. Coleman, presented the plan, in summary, which may be further summarized as follows:

The State Department of Health has found some funds which can be used to improve medical practice. The Postgraduate Medical Education Committee of the State Medical Association had been advised that these can be used. The entire idea is to better medical service throughout the State, since it is important that physicians keep constantly abreast of the changes that occur in the science and the art of the practice of medicine. This meeting should determine if the State Medical Association is to join in the project, and, if so, two propositions are to be considered; first,. will the schools do the work and, second, will the medical profession agree with this close association with the federal and state governments?

At this meeting, Dr. Curtice Rosser moved that the Committee on Postgraduate Medical Education accept the plan offered by the State Department of Health. This was seconded by Dr. M. L. Wilbanks, Chairman of Board of Councilors, and was carried unanimously. It was decided to appoint two members of the committee on Postgraduate Medical Education to confer with the Deans of the two medical colleges, Baylor and the University of Texas, and the State Health Department, as to the details of the courses to be given. Dr. Dick P. Wall of Galveston, was appointed to arrange the details with Dr. John W. Spies, at Galveston, and Dr. Curtice Rosser of Dallas, was appointed to work with Dr. W. H. Moursund, Dean of Baylor University, Dallas. Dr. J. M. Coleman, as a representative of the State Health Department, was made a member of this group to handle the details involved. The following plan was submitted to the Children's Bureau for the proposed intramural medical training for physicians, by Dr. Geo. W. Cox, State Health Officer:

"It is proposed that the two class A medical schools in the State of Texas, namely, Baylor University and the University of Texas, will provide one month's intensive course in obstetrics and pediatrics for general practitioners. The material presented in these courses will be both didactic and clinical, with the opportunity for the physicians attending the course to participate in and assist in clinics, ward rounds, clinical conferences, actual deliveries, and infant care. Approximately fifty per cent of the time will be given to didactic instruction, and provision will be made for special laboratory demonstrations, as desired by individual physicians.

"The proposal provides a scholarship for physicians, of $200.00 for the one month's training. Forty physicians can be trained on this basis. Tuition will also be paid by this department, at a rate to be determined, but not to exceed $50.00 per student. To be eligible for scholarship, a physician must, (1) reside in a city of less than 25,000 population; (2) be between thirty-five and fifty-five years of age; and (3) must be engaged in general practice of medicine, including obstetrics and pediatrics in his practice.

"In case more than forty physicians apply for scholarships, selection will be made on a geographical and population basis, according to the plan developed by the postgraduate committee of the State Medical Association.

"With regard to the course itself, as we have indicated previously, it seems to us that the schools can adequately plan the curriculum. This department is willing to render service in any possible way in assisting in the programs, whether it be by supplying materials, motion pictures, speakers, or whatever type of coöperation seems desirable."

By March 1, this group had completed details with Drs. Spies and Moursund, and the schedules were approved by the committee, and by Dr. J. M. Coleman for the Department of Health. These schedules were published in the March, 1940, number of the Texas State Journal of Medicine.

The selection of applicants for the course was a serious and difficult task, and required voluminous correspondence between the Secretary, Dr. Holman Taylor, the Board of Councilors, the Members of the committee, the State Health Department and the Deans of the Medical Schools. There were

seventy-one applicants, only forty of whom could be selected. Ten of the applications were received after the list had been prepared. These were sent to the State Department of Health to be considered if vacancies occurred.

On April 24, 1940, after frequent conferences with Dr. J. M. Coleman, Director Division of Maternal and Child Health of the State Board of Health, the distribution was made as follows, which, we believe, represents as fair a distribution as could be made:

District No.	Applications	Number Selected	Number of Alternates
1	1	1	0
2	7	3	2
3	2	1	0
4	7	4	2
5	6	3	0
6	9	4	1
7	2	2	0
8	1	1	0
9	7	4	2
10	7	4	3
11	1	1	0
12	7	3	0
13	7	3	0
14	10	4	1
15	5	2	0
Totals	79	40	11

Your committee has also, at various times, attended the Clinical Societies which have been held at Dallas, Houston, San Antonio and El Paso. While the committee has no direct connection with these clinical societies, we have kept in close touch with their progress and development. We heartily commend this excellent type of Postgraduate Medical Education. The programs of these societies are built around the capabilities of distinguished guest speakers. The local members of the society give practical discussions and lectures upon selected subjects in the various specialties. These societies charge moderate registration fees. As a rule, a banquet and a social program is provided. Your committee congratulates the Clinical Societies upon their success.

We have also been in touch with the Fracture Committee of the State Medical Association, the work of which has our warm approval. Through this committee we have secured close contact and coöperation with the Texas State Highway Department and the Texas Public Safety Commission. The committee has achieved much needed newspaper publicity. In this connection, we are particularly grateful for the assistance of Mr. Frank G. Huntress, of the *San Antonio Express and Evening News*, who has secured wide publicity of a series of articles prepared by our fracture committee, which are brief, pertinent and readable. These articles tell in lay terms just what shoud be done in accidents involving fractures. We approve of the articles, in their wide distribution.

A special committee has been appointed on the control of pneumonia. This committee had a meeting in Fort Worth January 7, 1940, and will report to this House at this meeting. This committee has had the coöperation of the State Health Department.

Respectfully submitted,
F. P. Miller, Chairman,
Curtice Rosser,
Dick P. Wall,
J. S. McCelvey,
George R. Enloe,
W. Herbert Hill.

Next we have the report of the Committee on Pneumonia Control.

Secretary Taylor then presented the report of the Committee on Pneumonia Control, as follows:

REPORT OF THE COMMITTEE ON PNEUMONIA CONTROL

Your Committee begs to submit the following report of its activity since its appointment, the latter part of December, 1939:

At its first meeting, January 7, 1940, at Fort Worth, in collaboration with representatives from the Texas State Board of Health, your Committee worked out and adopted a working program for its future activity. The main features of this program were as follows:

1. Because of the limited funds available, it was decided to limit the program, for the time being, to the cities of Dallas, Houston and San Antonio. In these cities, the benefits of the program were to be extended to indigent patients in those hospitals that would agree to meet the requirements set down by the Committee. In such hospitals, the indigent patients with pneumonia were to be furnished sulfapyridine and type specific sera free of charge.

2. Laboratory tests and hospital records to be required in each case treated under the program were agreed upon. Certain general rules regarding the treatment of pneumonia were also adopted. It was agreed that the program would be extended to only such hospitals as would agree to fulfill the requirements regarding minimum laboratory tests, the keeping of records and the recommended therapeutic procedures.

3. The Director of Laboratories of the State Department of Health was to be responsible for carrying out of the details of the program. In each one of the three cities selected, the local health officers were to be directly responsible for the carrying out of the State Program in their respective spheres of activity. These health officers were to work with a local Pneumonia Advisory Committee, selected by the local County Medical Society and the State Pneumonia Committee.

4. Requirements for "pneumonia centers," or points for the storing of sulfapyridine and the sera in each city, were defined. It was agreed that the distribution of the necessary drugs from such centers to the patients was to be through the local city health officers.

5. Certain educational programs for the enlightenment of the lay and professional public were adopted. These programs were to be put into operation through the Texas State Board of Health and our committee. The work was to include lectures, informative publications, appropriate films and an exhibit at the annual session of the State Medical Association, in Dallas, this year.

Within a short time after the Fort Worth meeting, the program was put in operation in the three cities mentioned above. Later, the work was extended to the cities of Galveston and El Paso. Though we do not have the complete reports before us, it can be said that from four to five hundred indigent pneumonia patients were furnished sulfapyridine or sera, or both, through our committee. The results, especially as far as lowering the mortality rate among indigent pneumonia patients is concerned, were gratifying.

It is hoped that funds and circumstances will permit the extension of the work of this committee to other communities in the near future.

Respectfully submitted,
Joe Kopecky, Chairman,
John W. Spies,
H. M. Winans,
E. G. Graves,
H. H. Latson,
C. W. Awe,
W. G. Maddox,
S. W. Bohls.

The report of the Committee on Pneumonia Control was then referred to the Reference Committee on Scientific Work.

The Secretary then presented the report of the Liaison Committee, Lone Star State Medical, Dental and Pharmaceutical Association, as follows:

REPORT OF COMMITTEE ON LIAISON LONE STAR STATE MEDICAL, DENTAL AND PHARMACEUTICAL ASSOCIATION

It will be recalled that this committee was set up pursuant to a resolution passed by the House of Delegates at the last annual session, the purpose of which was declared to be "to receive and act upon communications, and when necessary consult with representatives of the Lone Star State Medical, Dental and Pharmaceutical Association in all matters of mutual concern pertaining to the practice of medicine, and where physicians are involved." The resolution recognized the Lone Star State Medical, Dental and Pharmaceutical Association as the organization representing ethical Negro physicians of Texas.

In accordance with the resolution and instructions involved, our committee has dealt with several important matters brought to our attention by a similar committee in the Negro organization. There has been no embarrassment, and nothing but the best of feeling throughout. Our committee feels that the idea exemplified by this committee is sound, and at least partly the solution of the Negro problem in Texas as it relates to the practice of medicine. It is our desire, in the light of our experience, that this House of Delegates applaud the behavior of Negro physicians under the circumstances. We may well go further and applaud the behavior of our own group.

Meeting of the National Medical Association to Be Held in Texas.—Our attention was early called to the fact that the National Medical Association, the Negro organization, was to meet as the guest of the Lone Star State Medical, Dental and Pharmaceutical Association, at Houston, in August, 1940. While that date extended beyond the time of service of our committee, we decided to do something about it. It would be too late to act after our successors took over. Therefore, we pledged the sympathetic and moral support of our white physicians to the Negro physicians in their enterprise, we believe the first of the kind to take place in Texas. It occurred to us that some sort of expression would be helpful, in view of the probability that many Negro physicians of other sections of the country would think that they would not be welcome in Texas. It is difficult, we know, for our people in the Northern and Eastern States, to understand the cordial relationship between the two races in our section of the country, in view of the social implications. They cannot know that there rarely ever is any effort on the part of any of our people to involve anything of a social nature in the relationship between the two races.

Therefore, and as an expression of the position of the white physicians in the premises, we have submitted to the National Medical Association, through its Texas state body, the following:

The State Medical Association of Texas has heartily joined the Lone Star State Medical, Dental and Pharmaceutical Association in its invitation to the National Medical Association, Inc., to hold its 1940 annual conference in the State of Texas. This joint invitation represents a development in relationship between physicians of the two races concerned which may well prove to be of great importance, particularly in the South. It may be said in passing, that there has never been any embarrassment or expression of racial antipathy between the white and Negro physicians in Texas. There are those who doubtless think otherwise. Naturally Negro physicians have established practice in sections of the State where the race is well represented. In such sections, it can be said without reservation that the white physicians have moved over and made room for the incoming Negro physicians, exactly as it has done for those of its own race. When epidemics have come to our people, we have all coöperated in their suppression, regardless of race or religion. Even so, there have been social implications which have caused concern. Such matters have been beyond the realm of the medical profession, thus not subject to change by members of the profession. Therefore the need of some practical expedient of a professional sort.

Last year, under the presidency of Dr. E. W. Bertner of Houston, conferences between representatives of the Lone Star State Medical, Dental and Pharmaceutical Association, and the State Medical Association of Texas were held, which resulted in the establishment of a liaison group representing each organization, the two by conference to deal with all questions of mutual interest, and which ordinarily would be dealt with in a common organization. It is our fond expectation that this arrangement will result in that close coöperation and professional sympathy which seems necessary and desirable in dealing with the serious problem of health among our respective and collective peoples. And it is in the light of this development in Texas, that the State Medical Association, representing the great majority of the white physicians of the State, extends to the members of the National Medical Association, representing the ethical Negro physicians of the Nation, an invitation to come to Texas, and attend the meeting of their national organization. Those who take advantage of this opportunity to visit the great State of Texas will find a most hearty reception at the hands of the white physicians of the State.

Perhaps it should not be necessary to thus emphasize racial differences, but in the light of the all too general opinion that the two groups do not get along so well in the South, perhaps it is well so stated. The State Medical Association of Texas has by resolution, acknowledged the Lone Star State Medical, Dental and Pharmaceutical Association as the organization representing ethical Negro physicians of Texas. By implication, its guests will be looked upon as representing the ethical Negro physicians nationally. Again let it be said that visiting Negro physicians will be quite cordially received in Houston, and in Texas.

In this connection, it was deemed desirable by the President of the Lone Star State Medical, Dental and Pharmaceutical Association, Dr. Thelma A. Patten-Law of Houston, that one or more speakers from our Association appear on the program of the National Medical Association meeting at Houston, in August, not merely as a matter of interest and information, as would other speakers, but in order to disclose that the coöperation between the white and Negro physicians of Texas is a fact and not purely a paper affair. To this we readily agreed, and the incoming committee, in conference with the incoming officials of the Lone Star Medical Association, will determine who is to thus appear and, possibly, the scope and direction of any address thus delivered. In view of the implications involved in this assignment, we deem it advisable that this House of Delegates approve the project.

Conditions at State Sanatorium for Tuberculous Negroes.—A committee of Negro physicians, headed by the President of the Lone Star State Medical, Dental and Pharmaceutical Association, recently made a survey of conditions at the Kerr-

ville State Sanatorium for tuberculous Negro patients, and embodied their report in the form of a resolution, which resolution we here bring to your attention:

"We the undersigned, visited the Kerrville State Sanatorium for Tuberculous Negro patients on March 27, 1940, in the interest of the Executive Board of the Lone Star State Medical, Dental and Pharmaceutical Association with the view of increasing the usefulness of facilities offered by the Commonwealth of Texas for the care of Negro tuberculous patients, thereby aiding the recovery of these patients and decreasing the incidence of tuberculosis in Texas among Negroes.

"After a careful survey of the institution, we note the following existing conditions:

"1. The patients are apparently well housed and cared for, as the physical plant and natural environmental conditions are ideal.

"2. The equipment of the institution is not adequate for modern treatment, for example:
   (a) *X*-ray equipment is antiquated, and inadequate for an institution of the size and scope.
   (b) There is no modern and well equipped operating room. Autoclaves and facility for large scale sterilization are not provided.

"3. There is a very meager pathological laboratory, and no facilities for making routine or special diagnostic cultural or experimental studies.

"4. In the culinary department the nurses and patients dine in the same room and at the same time. And the resident physicians with their families dine in an adjacent room of which the patients' dining room is a common corridor.

"5. The housing of nurses and physicians is inadequate, demoralizing and discriminating. For example: Nurses are housed in the same dormitory as the open-case patients. The physicians and their wives are housed on the second floor of the store room on the same corridor with the kitchen personnel.

"After considering these observations, we feel that in the interest of the medical profession and in the name of the people of Texas, there should be a survey by a factfinding commission appointed from the Liaison Committee of the State Medical Association of Texas, and the Lone Star State Medical, Dental and Pharmaceutical Association to investigate, correlate and offer suggestions for improvement of the service that should be rendered to those unfortunate victims of tuberculosis. We further suggest and urge that this commission function at once in order that its findings may be appraised by the State Medical Association of Texas at its 1940 session, and that a proper plea be presented to the State Board of Control."

We feel that the situation to which attention is called deserves attention. If conditions are as stated, and we have an idea they are, something should be done about it. Perhaps the succeeding committee will be in a position to appoint a representative to make an inspection, either with representatives of the Negro group, or on his own. If conditions are found to be anything like those stated or, indeed, not entirely satisfactory, it is our recommendation that our Legislative Committee be directed to do what it may properly do to secure necessary appropriation to better the conditions complained of.

PROVISIONS FOR THE CARE OF NEGRO EPILEPTICS, by the addition of a ward for Negro patients at the Abilene State Hospital, was provided for in the appropriation measure of the last Legislature, but was vetoed by the Governor. This seems to be a very necessary extension of the welfare service of the State. Our committee is hopeful that the institution thus provided for will eventuate, and that the service involved will be extended to meet the needs clearly indicated. We recommend that our Legislative Committee be instructed to act accordingly.

Respectfully submitted,
L. H. REEVES, Chairman,
HOLMAN TAYLOR, Secretary,
JOHN T. MOORE,
M. L. WILBANKS,
CLAUDE C. CODY, JR.

The report of the Liaison Committee, Lone Star State Medical, Dental and Pharmaceutical Association, was then referred to the Board of Councilors as a reference committee.

Secretary Taylor then presented the report of the Fraternal Delegate to the Texas State Dental Society.

REPORT OF FRATERNAL DELEGATE TO THE TEXAS STATE DENTAL SOCIETY

I attended the annual session of the Texas State Dental Society, as directed.

After preliminary remarks in which I explained that the suggestions that I was about to make were for the benefit of both dentists and doctors, I gave as my first point the need for cleaning house within both professions. I suggested that we should eliminate every legitimate criticism that the public has been able to lodge against us.

Second, I suggested that we should serve with a public spirit. I took occasion to comment on the fine way in which the dentists are sensing their own responsibilities to the public, to see that the dental health interests of the community are provided for. In view of this attitude, I noted that neither the dentists nor the dental profession can be accused of selfishness in their service within their respective communities, and that any criticism in this direction from politicians or others seeking to supplement private practice with government controlled service, would be unjust.

My third point was that after cleaning house and eliminating legitimate criticism, and after looking about to see in what way our service could be extended to cover all the needs of the public, we should stand arm in arm—doctors and dentists—medicine and dentistry, and fight, not by physical encounter, not by political racketeering, not even with propaganda, but through education and thorough demonstration to the public of the great value of modern dentistry and modern medicine, in the progress and welfare of the nation.

Respectfully submitted,
J. EDWARD JOHNSON.

The report of the Fraternal Delegate to the Texas State Dental Society was then referred to the Reference Committee on Reports of Officers and Committees.

Dr. Preston Hunt then presented his report as Fraternal Delegate to the Texas Public Health Association.

REPORT OF FRATERNAL DELEGATE TO THE TEXAS PUBLIC HEALTH ASSOCIATION

In obedience to the duties vested in me through my appointment as Fraternal Delegate to the Texas Public Health Association, I visited this organization in Galveston, October 2nd, 1939.

I addressed the assembly, advising the officers and members of our wholehearted desire to assist and co-

operate with them in a consistent effort and program toward the elevation of the present health status of our citizenry, which sentiment was acknowledged with applause.

Respectfully submitted,

PRESTON HUNT.

The report was then referred to the Reference Committee on Reports of Officers and Committees.

Secretary Taylor then presented the report of Dr. Cary A. Poindexter as Fraternal Delegate to the Texas State Hospital Association.

REPORT OF DELEGATE TO THE TEXAS STATE HOSPITAL ASSOCIATION

Your delegate attended the assembly of this organization, in San Antonio, February 22, 23, and 24. A notable feature of the Assembly was the fact that the Texas State Association of Nurse Anesthetists, The Texas Occupational Therapy Association, The Texas Chapter of Association Record Librarians of North America, and The Texas Chapter of The American Physiotherapy Association, met at the same time and place, with the same headquarters and a compositely published program. The only program numbers in common, however, were the luncheon and the banquet. This was my second attendance on this Assembly. Approximately the same plan was followed last year in the meeting at Fort Worth.

Your delegate attended only the meetings of the Texas Hospital Association. The discussion of the first morning session dealt exclusively with group hospitalization insurance. Lawrence Payne, Waco, Lucius Wilson, Galveston, and Bryce Twitty, Dallas, contributed to these discussions. The discussions concluded with a round table session. This has been the foremost, principal subject of discussion at the past two meetings. It was held that the Texas medical profession is almost unanimously in accord with this effort. It seems to be the "way out." Witness the notable growth of the Association fostered "Group Hospital Service Incorporated": Aug., 1939, 1,078 members; Sept., 1939, 4,133 members; Oct., 1939, 9,829 members; Nov., 1939, 17,071 members; Dec., 1939, 21,645 members; Jan., 1940, 27,362 members; Feb., 1940, 36,287 members; March, 1940, 44,037 members, and still growing.

In fact, it would seem that no issue has yet arisen on which there can be any serious discord as between the medical profession and the Hospital Association. This organization comprises a representative cross-section of governmental and voluntary hospitals, and the attitude and determination to protect and advance voluntary hospitals is outspoken.

Another outstanding feature of the meeting was a detailed and meticulous discourse on hospital accounting, which was concluded by a "Round Table" discussion.

Two discussions were of commanding interest: "Why Women's Auxiliaries," by Mrs. John G. Benson, of Indianapolis; and "Principles of Personnel Management," by Miss Bertha E. Beecher, Cincinnati, Ohio.

We should congratulate the Texas Hospital Association on its phenomenal growth, the manner in which it has embraced hospitals large and small, and the manner in which it has striven to advance those interests which are common to all. At a recent date, the member hospitals numbered 165.

Miss Ara Davis of Temple, is the incoming President, and Mr. Harry Hatch, Amarillo, is the President-Elect. Miss Madelyne Sturdivant, Dallas, was elected Executive Secretary.

Respectfully submitted,

CARY A. POINDEXTER.

The report was then referred to the Reference Committee on Reports of Officers and Committees.

Secretary Taylor then presented the report of Dr. O. E. Egbert as Fraternal Delegate to the Arizona State Medcial Association.

REPORT OF DELEGATE TO THE ARIZONA STATE MEDICAL ASSOCIATION

I beg to report that as alternate Fraternal Delegate to the Arizona State Medical Association, I appeared before that body in regular session on April 19th and made a short talk, extending greetings from the President of the State Medical Association of Texas to their organization, and expressing our willingness and desire to coöperate with their Association in every way possible, to the end that Organized Medicine in the Border States presents a consistent and compatible program, one with the other, to the end that Organized Medicine be respected by our people and receive the proper consideration at the hands of our respective State Governments and the Federal Government, as well. I expressed a willingness to carry back to the State Medical Association of Texas any recommendations for our House of Delegates that their officers might like to make.

President Harbridge expressed appreciation of the official greetings from our Association, but to date I have received no recommendations from their officers or House of Delegates. I, of course, extended them an invitation to attend the Annual Meeting in Dallas next month.

Respectfully submitted,

O. E. EGBERT.

The report was then referred to the Reference Committee on Reports of Officers and Committees.

Dr. Edward C. Ferguson then presented his report as Fraternal Delegate to the Louisiana State Medical Society.

REPORT OF FRATERNAL DELEGATE TO THE LOUISIANA STATE MEDICAL SOCIETY

This is to advise that I attended the Louisiana State Medical Society meeting as delegate from this State. I was given a most warm and cordial reception, especially being engineered around by Dr. C. C. deGravelles.

The privilege of the floor was extended to me, and I made a short talk on the opportunity and privilege that organized medicine has at this time to cooperate with the Government if it were possible to consolidate our medical activities in such a way that we could offer something definite to the Government, and at the same time be in a position to control the medical and the medical care activities that are necessary for the perpetuation of our Democratic form of government, rather than allow political control of doctors and the public.

The medical activities of the State of Louisiana are in a very much better condition than they have been for several years, and with the election of a new Governor, and his coöperation, the medical outlook in Louisiana is materially improved. A resolution was read and adopted to take the state hospitals of whatsoever kind out of politics.

I called the attention of the Association to the fact that there had been and was being established, the most cordial relations between the State Board of Medical Examiners, the State Health Department and the State Medical Association of the State of Texas. Also that we had a most outstanding Medical Journal in the United States, as well as the most outstanding Secretary, Dr. Holman Taylor. I told them that I thought that our medical setup is in better condition than at any time in the history of this State.

I had the opportunity to shake the hand and chat with one of the most outstanding medical men in

this country, Dr. Rudolph Matas, to whom this particular session of the Association was dedicated.

In closing my remarks, I offered the good wishes and acclaim both of the Association of the State of Texas and my individual appreciation of Dr. Matas. I might also state that the House of Delegates of the State of Louisiana has adopted our plan of printing beforehand the various reports of Officers and Committees, which saves them from four to five hours of work. To me it was a most enjoyable experience.

Respectfully submitted,
EDWARD C. FERGUSON.

The report was then referred to the Reference Committee on Reports of Officers and Committees.

The Secretary then presented the report of the Fraternal Delegate to the National Medical Association of Mexico, Dr. A. C. Scott, Jr.

REPORT OF FRATERNAL DELEGATE TO THE NATIONAL MEDICAL ASSOCIATION OF MEXICO

Upon inquiry it was found that there would be no meeting in Mexico of the National Medical Association during 1939. Your delegate received an invitation to attend and represent the State Medical Association of Texas and the American College of Surgeons at the organization meeting of the Colegio Indo-Latino De Cirujanos. After proper credentials were received from the President of the State Association, and greetings from our Association to the Colegio Indo-Latino De Cirujanos, your delegate went to Mexico City and attended this meeting.

The Colegio Indo-Latino De Cirujanos is an organization of surgeons of Mexico, Central America and South America, corresponding in character to the American College of Surgeons of the United States. The initial steps in organization were started three years ago, but the first organization and full meeting of the College was held in Mexico City November 13th to 17th, 1939. The purpose of the College of Indo-Latin Surgeons is to raise the quality and character of surgery and medicine throughout those countries, and their aims and policies are quite similar to those of the American College of Surgeons in this country.

Greetings from our Association President and the Medical Fraternity of Texas were presented in Spanish by your delegate, at the Convocation Meeting in the Palace Belles Art on November 15th. Your delegate was the only North American representative present. As such, he was given a place of honor beside the President of the Colegio Indo-Latino De Cirujanos, Doctor Jesus Bas, and the Minister of Public Health, and was accorded every courtesy and consideration.

The address of greeting indicated our high regard for the character and skill of our professional brethren in Mexico and in the Central and South American Republics, our congratulations on the formation of this new organization for raising the standards of medicine in those countries, and our wish to bring about an increasing friendship and exchange of scientific ideas between their organization and ours.

The President and numerous members of the Colegio Indo-Latino De Cirujanos publicly and privately expressed their sincere appreciation of our Association in sending a delegate to them, and in our expressions of friendship and good will.

Respectfully submitted,
A. C. SCOTT, JR.

The report was then referred to the Reference Committee on Reports of Officers and Committees.

The Secretary then presented the report of Dr. Stirling E. Russ, Fraternal Delegate to the Oklahoma State Medical Association.

REPORT OF FRATERNAL DELEGATE TO THE OKLAHOMA STATE MEDICAL ASSOCIATION

I attended the meeting of the Oklahoma State Medical Association and was treated very cordially. I presented to the President and President-elect our President's wishes and hopes for theirs to be a successful meeting, and assured them that we were willing and anxious to coöperate with them in anything of mutual interest. They assured me of their desire to do the same for Texas.

The Oklahoma State Medical Association is especially interested in their Post-Graduate Medical Education program now in effect, and they voted at this session to continue it for another two-year period. Reprints and an outline of their Post-Graduate Medical Education program, which they have found most satisfactory, are attached.

Respectfully submitted,
S. E. RUSS.

Secretary Taylor: I am submitting communications from the Louisiana State Medical Society appointing Dr. A. A. Herold of Shreveport as Fraternal Delegate, a letter from the Texas Public Health Association appointing Judge Guy C. Jackson as Fraternal Delegate, a letter from Dr. Danforth of the Texas Pharmaceutical Association appointing Mr. R. L. Reader Fraternal Delegate, Dr. Henry F. Hein as alternate, and a letter from the New Mexico Medical Society appointing Dr. C. A. Miller as Fraternal Delegate from the New Mexico Medical Society. I move that these communications be received and filed.

The motion was seconded by Dr. L. C. Heare of Jefferson, and carried.

Secretary Taylor: I have a communication here from the Secretary of the Missouri State Medical Association inviting the members of the medical profession of Texas to join the medical profession of Missouri in the trip to the New York annual session of the American Medical Association, by way of three special trains that they are running out of St. Louis. You will remember, in that connection, your own schedule over the Pennsylvania. I move the communication be received and filed.

The motion was seconded by Dr. Wilbanks, and it was so ordered.

Secretary Taylor: I have a communication from the Secretary of the Oregon State Medical Society, calling attention to the proceedings of the House of Delegates of that organization in criticism of certain publicity of the Mayo Clinic and Foundation. I move that it be referred to the Reference Committee on Resolutions and Memorials.

The motion was seconded by Dr. Wilbanks, and it was so ordered.

Secretary Taylor: I have a communication from Thomas A. Hendricks, executive secretary of the Indiana State Medical Association, carrying a resolution from that organization with reference to military preparedness in the face of the present contingency. The resolution was read and referred to the delegates of the Association to the forthcoming meeting of the American Medical Association.

Secretary Taylor: I have a communication from the Medical Society of Virginia embodying certain resolutions. They were read and referred to the Council on Medical Economics.

Secretary Taylor: I have a communication from the National Association of Retail Druggists, signed by the executive secretary. This communication calls our attention to a resolution with reference to the marketing of vitamins. The druggists want us to endorse a plan of requiring that all vitamin bearing foods, and foods advertised as being vitamin bearing, be sold through druggists exclusively.

The communication was referred to our Reference Committee on Resolutions and Memorials.

Dr. T. A. Tumbleson: I wish to present a resolution which has for its purpose the establishment of a scientific section on pediatrics. It requires an amendment to the by-laws of this Association. A resolution was adopted by the Texas State Pediatric Society at its business meeting October 28, 1939, at Fort Worth, Texas, recommending the innovation. It was approved by the Council on Scientific Work of the State Medical Association, in Temple, January 15, 1940. In the interest of time and because the resolution has become rather well known throughout the state, and mentioned by our President in his address this morning, and by two of the council reports, I will omit the reading of the resolution and offer the following amendments to the By-Laws of the Association, and move their adoption.

"Amend Section 1, Chapter X of the by-laws by changing the third and fourth lines of the section in the 1937 published edition, on page 24, by eliminating the words 'and Diseases of Children' (amended in 1939 to read 'Pediatrics').

"Amend Section 1, Chapter X of the by-laws page 24, 1937 edition, by adding to the list of sections set up therein the following: '(8) Section on Pediatrics.'

"Amend Section 3, Chapter X of the by-laws, page 24, 1937 edition, by changing the last line of the section to read as follows: 'Pathology, 18; Pediatrics, 18'."

At the present time it is the policy of the State Medical Association to provide one invited guest for each scientific section, with an extra guest for the Section on Medicine and Pediatrics and on Surgery. There is no by-law about it. The policy was set up by action of the House of Delegates on the report of the so-called Committee on Ways and Means, in 1937 (page 115, June JOURNAL). It is moved that "Chapter X of the by-laws be amended by adding a new Section 2, between Section 1 and the present Section 2, page 24, 1937 edition of the constitution and by-laws, as follows: 'Section 2. Finances permitting, the Board of Trustees shall appropriate sufficient funds from the treasury of the Association to cover the railroad fare, sleeping car fare and hotel expenses of one invited guest for each of the several scientific sections, and one additional guest each for the Section on Medicine and the Section on Surgery, all guests to be selected in accordance with Section 4, Article II, of the constitution. Amend Chapter X of the by-laws, page 24, 1937 edition, by changing the numerical designation of Sections 2, 3, 4, 5, 6 and 7 to Sections 3, 4, 5, 6, 7, and 8, respectively."

President Reeves: This resolution will be referred to the Reference Committee on Scientific Work.

Dr. B. E. Pickett: I have been asked to offer a resolution coming from the city and county health officers' meeting, and I take pleasure in doing so.

The resolution called for better appropriations for the State Health Department. It was referred to the Reference Committee on Reports of Officers and Committees.

Dr. J. N. White introduced a resolution pertaining to the public health. The resolution was referred to the Reference Committee on Reports of Officers and Committees.

Secretary Taylor: I have been requested by Dr. Judson Taylor, councilor for the Ninth District, to introduce the following proposed amendments to the by-laws of the Association:

"Amend Section 2, Chapter XIII of the by-laws by adding to District No. 9, as set up in that section, page 33, 1937 edition, the word 'Trinity' between the words 'San Jacinto' and 'Waller'."

"Amend Section 2, Chapter XIII of the by-laws by removing from District No. 11, as set up in that section, page 33, 1937 edition, the words 'and Trinity' and by removing the comma between 'Leon' and 'Smith' and inserting in lieu thereof the word 'and'."

I was asked to explain that the effect of this amendment to the by-laws will be to remove Trinity County from the Eleventh District and add it to the Ninth District, in order that it may be joined to another county medical society to form an organization which the two councilors concerned believe will be effective and active. It is understood that both councilors have agreed to the change, and that the two county societies involved would like the change.

The amendments were referred to the Board of Councilors as a reference committee.

Dr. L. B. Jackson: In 1938 this body adopted an amendment to the by-laws which read as follows, "Amend Section 1, Chapter XIV by adding a new section to read as follows: 'Members of county medical societies who are serving internship and residenties in hospitals as part of their educational qualifications and who are not in private practice shall be assessed dues as follows: $4.00 per capita, of which amount $3.00 shall be for subscription to the TEXAS STATE JOURNAL OF MEDICINE and $1.00 for medical defense. Change the numerical designation of succeeding sections accordingly'."

I have found during the last year that it is not practical to enlist interns in medical societies under that arrangement. In Texas the internships begin in all the hospitals with which I am acquainted, on the first of July. They are assessed their dues beginning the first of July, which pays them up to the first of January. The interns are actually paying two years' dues for one year's membership. We had to return the dues to a number of our interns last year. I should like to offer an amendment to that to make it read as follows: "Amend Section 1, Chapter XIV, by adding a new section to read as follows: 'Members of county medical societies who are serving internships and residenties in hospitals as a part of their educational qualifications and who are not in private practice shall be assessed dues to cover a period of one year from July 1 to June 30 following, as follows: $4.00 per capita, of which amount $3.00 shall be for subscription to the TEXAS STATE JOURNAL OF MEDICINE and $1.00 for medical defense. Change the numerical designation of the succeeding sections accordingly'."

Secretary Taylor: You pay for the calendar year, and we could not adopt that amendment if we wanted to, without changing the constitution.

President Reeves: The amendment will be referred to the Reference Committee on Amendments to the Constitution and By-Laws.

President Reeves: Next is reports of reference committees. Is there any reference committee ready to report at this time?

Dr. Hall Shannon then read the report of Reference Committee on Finance, as follows:

FIRST REPORT OF REFERENCE COMMITTEE ON FINANCE

(1) We recommend Treasurer's report be adopted in its entirety, as printed.

(2) We recommend that the Association continue payment of the actual expenses incurred by Councilors in the discharge of their duty.

(3) We recommend the State Association continue payment of expenses of guest speakers, and payment of all other expenses recommended by the Board of Trustees.

(4) We wish to express our appreciation of the splendid services rendered by the Board of Trustees in their defense of the Medical Practice Act.

(5) We recommend that the report of the Council on Medical Defense be adopted as printed, and urge that Councilors and County Societies coöperate with this Council in its work.

Respectfully submitted,
HALL SHANNON, Chairman,
J. M. CAMPBELL,
A. F. LUMPKIN,
J. N. WHITE,
L. F. CROOK.

Upon motion of Dr. Shannon, seconded by Dr. J. H. McCracken, the report was adopted.

SECOND REPORT REFERENCE COMMITTEE ON CREDENTIALS

Dr. Tate Miller: We beg to report that 112 have registered; of those, 27 are ex-officio members and 85 are elected delegates, with their credentials in order.

Secretary Taylor: The State Board of Medical Examiners wants you to hear Dr. Crowe for a few minutes. I move that Dr. Crowe be given the privilege of the floor for ten minutes.

The motion was seconded by Dr. J. J. Hanna and carried.

(Vice-President H. E. Griffin then assumed the chair.)

Vice-President Griffin (In the Chair): Dr. T. J. Crowe, Secretary of the State Board of Medical Examiners, will now address you.

ADDRESS OF DR. CROWE

First, I want to thank the officers of the State Medical Association, and those members who interested themselves in my behalf, in the matter of my reappointment as a member of the State Board of Medical Examiners.

I want to tell you that what the Board needs most at this time is a prosecutor. The Attorney General has been helping us in cases where the District Attorney or his assistants demand that we furnish a prosecutor. Some District Attorneys claim that they know so little about our medical practice acts that they don't know how to attack arguments of the defense counsel. And usually the defense counsel is a cute actor. He knows all the tricks, and he works them on the young lawyers who are usually assigned to such cases. District attorneys in the larger cities seldom prosecute our cases. What we need is some one who knows enough about medicine to deliver at least a reasonable strong counter-attack. To illustrate, maybe I might repeat what has happened to us in one or two cases, particularly in San Antonio, where an attorney is paid by the month by the chiropractors of Texas, to defend them whether they are prosecuted or not. Such a defense counsel gets up before a jury and says, "Gentlemen, my client never professed to be a physician and surgeon, either publicly or privately. My client never gave a dose of medicine in his life. He doesn't believe in it. He has got a much better thing. My client never treated a disease or disorder. No, sir! What does my client do, gentlemen? He removes the cause of disease. And there is not a word in the medical practice act that says a man should be arrested for saving a man's life, or removing the cause of disease. Why, gentlemen of the jury, if you saw a man lying across the railroad track with his neck on the rails, and the Katy Flyer a hundred feet away, coming at eighty miles an hour, and you grabbed him by the feet and yanked him off the track, would you be arrested for saving that man's life? Would you be put in jail for that? No, sir! My friend and client here doesn't treat diseases or disorders. He simply puts his hand back here and adjusts the spine, that vertebra which was the cause of all of his trouble."

We had a case in San Antonio where a girl had a cystic ovary removed. She also had her appendix removed. Then she had her tonsils removed. There followed after several months, exophthalmic goiter. And when he went before the jury this attorney said, "Gentlemen of the jury, you heard this little girl say she had to have her ovaries removed; you heard this little girl say that she had to have her appendix removed; you heard this little girl say she had to have her tonsils removed. If this little girl had been in the hands of my good friend and client here, she wouldn't have been confined in the hospital for three or four months, suffering day and night from pain, stuffed with nauseous drugs, and saddled with all those hospital fees. No sir! My friend would have adjusted her spine, the cause of all of her troubles. Do you think he should be arrested for that? Do you think he should be prosecuted for saving a human life by removing the cause of disease?

Now, we have what appears to be a fool-proof definition of the practice of medicine, and it is as full of holes as sieve. It says any person shall be regarded as practicing medicine who publicly professes to be a physician or surgeon, and treats or offers to treat any person for a disease or disorder. The chiropractor doesn't do that, or so he says. You cannot go into the court house and convict a man of murder unless you prove that he did murder, and who he murdered. We cannot go into the court house and win all of our cases unless we prove that the accused did violate the medical practice act, and there isn't a word in our law which says what constitutes a violation of the medical practice act. I contend that the definition should say what acts constitute a violation. If a man treats a human being with x-ray or radium, or an instrument or mechanism motivated by galvanic or faradic electric current, or if he manipulates a human being for a fractured or dislocated bone or bones, then he is practicing medicine. There you have defined something. You have said what constitutes a violation of the law. I have consulted the attorneys and also the appellate courts of this state, and we can get that sort of thing in our law without changing our definition at all, by simply amplifying or specifying the things that are specifically violations of the law, amplifying that section of the law which says that it shall be unlawful for any man to do these certain things without registering in the office of the district clerk a license issued to him by the Texas State Board of Medical Examiners.

I have one little complaint. Doctor Taylor will tell you that I insisted that if we exempt the christian scientists from our law, we should do it by name, and should insist that the Healer be appointed by some authorized agency of the Christian Science organization, and not every Tom, Dick and Harry. Our law says, "Nothing in this law shall prevent the healing of disease by prayer by any religious organization, any church." Already we have three or four new religions. We have the cosmopolitan religion of the More Abundant Life, and we have the biopsychological religion, and more on the way, and any man or woman who goes out under the guise of any dogma of a church, can do the same sort of thing, and chiropractors could claim that they believe in the application of the hands to the back of a human being and a certain hocus-pocus of prayer to heal human beings. What is a tenet? The thing you believe, and the thing you practice or teach. And the law says that you do not do anything with them provided they not use a material remedy in practice, so long as they are teaching or practicing the tenets, the principles or the teachings of their religion. Now, what could you do if you tried to convict anybody for teaching?

I think that the exemption in the bill should be by specific mention.

I have heard some talk about basic science laws. Our law is the original basic science law, in that we don't examine in practice, nor do we examine in pharmacology or the use of drugs. We examine only in those things that are common to all. I think any basic science law should make the examination reasonably strict, and cut out the fellow who does not know. (Applause.)

On motion of the Secretary, seconded by Dr. McCracken, a recess was taken until 8:00 o'clock p. m.

EVENING SESSION

The House of Delegates was called to order by Vice-President, Dr. H. E. Griffin, at 8:00 o'clock p. m.

Dr. C. G. Swift then presented the report of the Reference Committee on Scientific Work, as follows:

FIRST REPORT OF REFERENCE COMMITTEE ON SCIENTIFIC WORK

(1) This committee recommends that that part of the report of the Board of Trustees dealing with the library be approved.

On motion of Dr. Swift, seconded by Dr. A. R. Shearer, the part of the report of the Board of Trustees dealing with the library was adopted.

(2) We recommend the approval of that part of the report of the Executive Council dealing with postgraduate medical education.

Upon motion of Dr. Swift, seconded by Dr. R. B. Touchstone, that part of the report of the Executive Council dealing with postgraduate medical instruction was adopted.

(3) We have reviewed the report of the Council on Scientific Work, and recommend that it be approved.

Upon motion of Dr. Swift, seconded by Dr. J. M. Travis, the report of the Council on Scientific Work was adopted.

(4) The report of the Committee on Cancer has been reviewed. This committee is in full accord with the Cancer Committee on the need for a cancer hospital. The members of this committee, realizing that the Cancer Committee's report is a result of thorough study, feels that it is unable to recommend either approval or disapproval, since it has had the opportunity of devoting only a brief period of study to this important subject. Consequently, this committee recommends that the members of the House of Delegates make known their wishes concerning this part of the report of the Committee on Cancer.

Dr. A. R. Shearer: In order to get the matter in shape for discussion, I move that we adopt this part of the report of the Cancer Committee.

Dr. E. L. Goar: I second the motion.

Secretary Taylor: A bill setting up a State Cancer Hospital was submitted to the Reference Committee on Scientific Work. It occurs to me that this bill should be read to this House, if this House is to decide whether it shall seek its passage.

The bill was then read by the Secretary.

After much discussion, participated in by Drs. M. W. Sherwood, W. A. King, R. B. Anderson, J. H. McCracken, A. R. Shearer, Holman Taylor, R. B. Homan, Jr., C. G. Swift, B. L. Jenkins, and Vice-President Griffin, the measure providing for cancer hospitals and cancer service, as reported by the Reference Committee on Scientific Work, was referred to the Executive Council for consideration.

(5) The report of the Committee on Revision of the Constitution and By-Laws is reviewed and approved.

After some discussion, this part of the report was approved, and the By-Law involved laid on the table until the next session of the House of Delegates.

(6) We recommend the approval of the report of the Committee on Mental Health.

Upon motion of Dr. Swift, seconded by Dr. McCracken, this part of the report was adopted.

(7) The report of the Committee on Fractures has been reviewed, and we recommend its approval.

Upon motion of Dr. Swift, seconded by Dr. Touchstone, this part of the report was adopted.

(8) The report of the Committee on Maternal and Child Health has been reviewed, and we recommend its approval.

Upon motion of Dr. Sherwood, seconded by Dr. J. J. Hanna, this part of the report was adopted.

(9) The report of the Committee on Tuberculosis has been reviewed, and we recommend its approval.

Upon motion of Dr. Swift, seconded by Dr. McCracken, this part of the report was adopted.

(10) The report of the Committee on Venereal Disease has been reviewed, and we recommend its approval.

Upon motion of Dr. Sherwood, seconded by Dr. D. J. Jenkins, this part of the report was adopted.

(11) The report of the Committee on Postgraduate Medical Education has been reviewed, and we recommend its approval.

Upon motion of Dr. Swift, seconded by Dr. Travis, this part of the report was adopted.

(12) The report of the Committee on Industrial Health has been reviewed, and we recommend its approval.

Upon motion of Dr. Swift, seconded by Dr. R. B. Touchstone, this part of the report was adopted.

(13) The report of the Committee on Malaria has been reviewed, and we recommend its approval.

Upon motion of Dr. Swift, seconded by Dr. C. E. Scull, this part of the report was adopted.

(14) The report of the Committee on Pneumonia Control has been reviewed, and we recommend its approval.

Upon motion of Dr. Swift, seconded by Dr. L. B. Jackson, this part of the report was adopted.

(15) The report of the Committee on Health Problems in Education has been reviewed, and we recommend its approval.

Upon motion of Dr. Swift, seconded by Dr. D. J. Jenkins, this part of the report was adopted.

(16) The report of the Committee on Scientific Exhibits has been reviewed, and we recommend its approval.

Upon motion of Dr. Swift, seconded by Dr. D. J. Jenkins, this part of the report was adopted.

Dr. Swift: I move the adoption of the report as a whole, with the exception of Item 4, which has to do with the report of the Committee on Cancer.

The motion was seconded by Dr. D. J. Jenkins and carried.

Dr. A. E. Sweatland then presented the following supplementary report of the Board of Councilors:

SUPPLEMENTARY REPORT OF BOARD OF COUNCILORS

For a number of years the Board of Councilors have had a pretty hard time getting along with our honorary members. We haven't had much of a basis on which to judge who should be honorary members and who should not. Last year, we asked for a revision of the By-Laws to correct certain conditions, and we found that it was necessary to first revise the Constitution. The Board of Councilors thought it would be well to let each county medical society furnish the funds for its honorary members. Really, the honor comes from their society as well as from the State Association.

Amendments to Constitution and By-Laws Pertaining to Honorary Membership

The Board of Councilors recommends the following: "Amend Section 1, Article II of the Constitution, Page 3 of the 1937 edition thereof, in Line 17 of the section, following the semicolon, after the word 'therefrom,' the words 'provided the county societies shall pay a membership fee in accordance with the By-Laws of the Association'."

The change in the By-Laws here recommended is as follows: "Amend Section 5, Chapter XI of the By-Laws, Page 27, 1937 edition thereof, in Line 10, following the word 'association,' after the semicolon, the words 'provided that a fee of $4.00 shall be paid by the said component county medical society as a membership fee for each member so elected'."

The amendments thus proposed were laid on the table until the next annual session.

Dr. Guy F. Witt then presented the report of the Reference Committee on Amendments to the Constitution and By-Laws, as follows:

FIRST REPORT OF REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

Your Reference Committee on Amendments to the Constitution and By-Laws, reporting as to the form of the amendment presented by the Committee on Revision of the Constitution and By-Laws, and pertaining to the establishment of a Council on Postgraduate Medical Education, recommends passage of the amendment in the form presented in the report.

Upon motion by Dr. Witt, seconded by Dr. Heare, this section of the report was adopted, and the by-law declared passed.

At the request of Dr. L. B. Jackson, who proposed a resolution concerning the payment of dues by interns, we recommend that the author be permitted to withdraw the resolution.

Upon motion of Dr. Witt, seconded by Dr. McCracken, this part of the report was adopted.

Secretary Taylor: Mr. Chairman, let me explain here, and I do so at the request of Dr. Jackson, that the purpose of the introduction of this amendment was to secure advantages to the interne that cost money. That is why the $4.00 is charged the interne member. I have advised Dr. Jackson that if that is all that is wanted, we will be perfectly willing to send the JOURNAL free to all interne members, pending the beginning of the calendar year after internship. In other words, they will join some time in October, and we will send them the JOURNAL until their regular subscription falls due in May, and that satisfies the doctor.

Upon motion of Dr. Witt, seconded by Dr. Touchstone, the report of the Reference Committee on Amendments to the Constitution and By-Laws was adopted as a whole.

Dr. J. Harolde Turner then presented the report of the Reference Committee on Reports of Officers and Committees, as follows:

FIRST REPORT OF REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND COMMITTEES

The committee has reviewed the President's message to the House of Delegates. We wish to compliment the President most highly on the attainments and accomplishments of the State Medical Association during his leadership. We feel that one of the outstanding features during his administration has been the counsel which he has sought where counsel was needed, which reminds us of the saying of Andrew Carnegie, "It marks a big step in a man's development when he comes to realize that other men can be called in to help him do a better job than he can do alone." He is to be most highly complimented in his untiring efforts to bring about a complete organization of the entire State Medical Association and its component parts. His recommendation and plea to the State Association and the county medical societies, in asking for leadership and the development of leaders, and the training of younger men to fit into the machinery, is well taken and should be carried back by members of this House of Delegates to the various county medical societies throughout the state, with the idea of effecting such a program.

Upon motion of Dr. Turner, seconded by Doctors Foster and Touchstone, the President's message to the House of Delegates was approved.

The report of the Secretary evidences further outstanding management on the part of that office during this particularly strenuous year, and his efficiency should be further commended at this time. He is to be complimented on carrying on such a voluminous amount of work during the year without additional personnel or expenditure.

Dr. Turner: I move the adoption of this report.

Dr. McCracken: I second the motion.

Vice-President Griffin: I want to discuss two or three things. It may be an impertinence again, but I don't know how many men in Texas appreciate Ed Cary. I know a lot of people in Texas do. We appreciate the work of our friend Reeves. He has done a good job. But how we would get along without Holman Taylor, I don't know, and if you are ready for the question, gentlemen, make it known by saying "Aye."

Dr. H. W. Cummings: Let's have a rising vote on that.

Dr. John T. Moore: I will vote for that if you include R. B. Anderson.

The report of the Secretary was adopted by a rising vote.

We feel that the Board of Councilors should be commended for their efforts in effecting the complete organization of the component county societies into a state-wide unit.

On motion of Dr. Turner, seconded by Dr. Witt, the report of the Board of Councilors was adopted.

The committee has reviewed the report of the Executive Council, and feels that it has done an outstanding piece of work during the year, especially considering the extreme difficulties encountered. We are heartily in accord with their recommendations, and we move that the report be adopted.

On motion by Dr. Turner, seconded by Dr. McCracken, the report of the Executive Council was adopted.

The report of the Council on Medical Economics was read and thoroughly discussed, and a hearing was held thereon. We feel that this is a very excellent preliminary report, yet totally inadequate as a basis for any definite form of insurance at this time. We believe that since the Executive Council, by motion adopted March 10, 1940, directed the Council on Medical Economics to prepare a plan for the distribution of medical services which will accomplish the objective of the movement and without violation of either the spirit or the letter of medical ethics, that the council should do so and that no special committee should be appointed. We would further recommend that this is of an urgent nature, and that completion of the contemplated plan should be made as rapidly as possible.

Dr. Turner: I move the adoption of this part of the report.

Dr. Tumbleson: I second the motion.

After much discussion, participated in by Drs. B. L. Jenkins, J. H. Turner, J. H. McCracken, L. C. Heare, M. W. Sherwood, R. B. Homan, Jr., Secretary Taylor and Vice-President Griffin, in the course of which discussion it was made clear that what was intended by the Reference Committee on Reports of Officers and Committees was that the development of a plan looking to the better distribution of medical service, along the nonprofit insurance line, should be worked out by the Council on Medical Economics, as recommended by the Executive Council, rather than by a special committee, as recommended by the Council on Medical Economics, the motion was passed, and the part of the report of the Reference Committee on Reports of Officers and Committees under consideration was adopted.

At this juncture, Dr. R. A. Trumbull moved that the report of the Reference Committee on Reports of Officers and Committees, on the report of the Council on Medical Economics, be so amended as to recommend the extension to the Council on Medical Economics of the authority and the responsibility of passing judgment on the reliability and desirability of accident and health insurance policies offered the medical profession on a group basis. The motion was seconded by Dr. Guy Witt, and after some discussion, was carried.

We move the report of the Committee on Transportation be adopted, and the committee commended for its work.

Upon motion of Dr. Turner, seconded by Dr. E. W. Jones, the report of the Committee on Transportation was adopted.

We move the adoption of the report of the Committee on Memorial Exercises, and urge a generous attendance on the services.

Upon motion of Dr. Turner, seconded by Dr. Touchstone, the report was adopted.

We feel that the report of the Committee on Medical Education and Hospitals is very pertinent, and should be seriously considered by every member of the State Association. We urge that delegates bring to the attention of the members of their societies the importance of the part that we as practitioners of medicine in this state should take in this regard.

Upon motion of Dr. Turner, seconded by Dr. D. J. Jenkins, the report was adopted.

We move the adoption of the report of the Committee on the Woman's Auxiliary. We commend the Woman's Auxiliary for its large membership, which makes it the second largest organization of its kind in the United States, and further, we feel that the efforts of the Auxiliary have been of great value to the medical profession, not only in this state but the Nation as well.

Upon motion of Dr. Turner, seconded by Dr. Travis, the report was adopted.

We have reviewed the report of the Delegate to the Texas State Dental Society, and move that the report be accepted with thanks.

Upon motion of Dr. Turner, seconded by Dr. McCracken, the report was adopted.

We have reviewed the report of the Delegate to the Texas Public Health Association, and move that it be accepted with thanks.

Upon motion of Dr. Turner, seconded by Dr. Tumbleson, the report was adopted.

We have reviewed the report of the Delegate to the Texas State Hospital Association, and move that it be accepted with thanks.

Upon motion of Dr. Turner, seconded by Dr. D. J. Jenkins, the report was adopted.

We have reviewed the report of the Delegate to the Arizona State Medical Association, and move that the report be accepted with thanks.

Upon motion of Dr. Turner, seconded by Dr. Touchstone, the report was adopted.

We have reviewed the report of the Delegate to the Louisiana State Medical Society and move that it be accepted with thanks.

Upon motion of Dr. Turner, seconded by Dr. Heare, the report was adopted.

We have reviewed the report of the Delegate to the National Medical Association of Mexico, and move that it be accepted, with thanks.

Upon motion of Dr. Turner, seconded by Dr. Schenewerk, the report was adopted.

We have reviewed the report of the Delegate to the Oklahoma State Medical Association, and move that it be accepted, with thanks.

Upon motion of Dr. Turner, seconded by Dr. T. A. Taylor, the report was adopted.

The following resolutions, presented by the Conference of City and County Health Officers, were approved:

RESOLUTIONS IN SUPPORT OF BETTER APPROPRIATIONS FOR THE STATE HEALTH DEPARTMENT

Whereas, this conference of City and County Health Officers is authorized by the Legislature of the State of Texas, and is charged with the duty of considering the state of the public health and all means of bettering the health of the citizens of this state; and

Whereas, after due consideration and discussion, this body feels that through mistaken ideas of economy much suffering may be caused; and

Whereas, our public health program is inadequately taken care of financially; and

Whereas, the appropriation for public health work in Texas is approximately 4½c per capita per year, and the average appropriation for such work in other states is 17c per capita, placing Texas third from the lowest state in this regard; and

Whereas, during the past year the appropriation in Texas was cut $75,000, leading us to anticipate an increase in disease commensurate with the diminution of public health activity; and

Whereas, any increase in disease will ultimately lead to an increase of public as well as private expenditure far beyond the cost necessary to prevent disease; and

Whereas, we feel that the legislators and the public do not fully realize the importance of more substantial financial aid to the State Health Department; therefore be it

Resolved, that this body go on record as asking the Legislature and the Governor seriously to consider the needs of the State Health Department and do everything possible to fill those needs. And be it further

Resolved, that a copy of this resolution be placed before the House of Delegates of the State Medical Association and that the Secretary of the State Medical Association send copies to the Governor, to each Legislator, and to each County Medical Society.

Upon motion of Dr. Turner, seconded by Dr. D. J. Jenkins, the resolutions were adopted.

A resolution introduced by Dr. J. N. White and referred to this committee should not be adopted because it will likely interfere with some very important legislation that we may want to put forward.

Upon motion of Dr. Turner, seconded by Dr. Heare, the resolution introduced by Dr. J. N. White was tabled.

Upon motion of Dr. Turner, seconded by Dr. D. J.

Jenkins, the report of the Reference Committee on Reports of Officers and Committees was adopted as a whole.

Dr. Clifford G. Swift then presented the second report of the Reference Committee on Scientific Work.

SECOND REPORT REFERENCE COMMITTEE ON SCIENTIFIC WORK

Your Committee approves the resolution from the Texas Pediatric Society requesting a Scientific Section on Pediatrics, and provided for in amendments to the by-laws of the State Medical Association, which amendments must lie on the table twenty-four hours before they can be voted on by the House of Delegates.

Upon motion of Dr. Swift, seconded by Dr. F. B. Malone, this part of the report was adopted.

Secretary Taylor: I see that the Secretary and General Manager of the American Medical Association is in the house. I move you, sir, that a committee comprising Dr. E. H. Cary, a past president of this Association and a past president of the American Medical Association, and Dr. Reeves, present President of this Association, be appointed to conduct him to this platform, that he may be introduced, and perhaps make a few remarks. (Applause.)

The motion was seconded and adopted, and Dr. E. H. Cary and Dr. L. H. Reeves, escorted Dr. Olin West to the rostrum.

(President Dr. L. H. Reeves assumed the chair.)

President Reeves: Dr. Cary will introduce our guest.

Dr. E. H. Cary: Dr. Reeves has paid me the honor of presenting this distinguished guest of ours. Proper organization, if it is effective, is very much like a good machine. A machine that is perfected has to have two things: It first has to have the power to move the machine, and then it has to have a balance wheel. The spirit and the purposes of the great profession of medicine throughout this country represents the force, and the balance wheel is represented by our distinguished guest, Dr. Olin West, whom I take pleasure in presenting to you. (Applause.)

ADDRESS OF DR. OLIN WEST

I feel very greatly honored to be presented to this group by a past president of the American Medical Association, and your own President, and I am grateful, indeed, for your courteous welcome. I have had two remarkable experiences today. I left Chicago last night on a train that had to pass through Arkansas. I had heard all of my life of the "slow train through Arkansas," and that was just what this one was. I had some hope that when it got into Texas it would speed up a little, but when it got over the line it was worse than it was in Arkansas, (laughter) a thing that I didn't believe was possible. The second remarkable experience I have had here tonight, is that for the first time in my life I have seen Holman Taylor confused. I have seen him lots of times when he was doing a lot of talking and didn't know much about what he was talking about, but he wasn't confused about it. (Laughter.) He thought he knew, and talked just as loud and just as long as if he had known, but tonight he seemed to be just a little bit off balance, and that gave me some comfort, because I think that nearly any secretary of a state association, or of any medical association, will find himself at times in a position where he doesn't know whether he is coming or going. And that is particularly true at this time in the history of medical organizations in this country. There are many things that are brewing, and many things stirring that are of the utmost importance to medicine, and consequently of the utmost importance to the people of this country; and there is no part of the life of our people that doesn't touch medicine importantly in many things.

I was much interested in listening to the reports of the chairman of your reference committees, and the consequent discussion that I have heard. You apparently have before you the same problems that every state medical association must consider and is considering. You have exactly the same problems in exactly the same ratio of importance that confront the medical profession of the United States as a whole. And some of them must be solved, or at least a very sincere and earnest and active effort made to find a solution. The seeds that have been laid against organized medicine within the last ten years, largely by those who have no appreciation or understanding of the fundamental values of medicine, and by others who have their own axes to grind, and still others who are sentimentalists from top to bottom, who are quite earnest and sincere but who do not understand and can never appreciate, apparently, the basic values of medical service and the necessity for the maintenance of the highest possible standards of medical service, and the constant improvement of medical service and all that is involved in the delivery of that service. The politicians in this country, as in every other country are taking advantage of a wave of sentiment that has swept over our own land—sentiment rather than reason. There is nothing that makes such strong sentimental appeal as the victim of disease, and especially if that victim be a child or a mother. The pressure from those who would make radical changes in our method of delivering medical service is, indeed, tremendous. As I see it, there is only one way in which that influence can be successfully combated, to the end that American medicine may continue to progress, that the art and science of medicine may be promoted in accordance with the knowledge of the only group on earth who can fully appreciate and understand its values, is for the medical profession to be master in its own house. It should control whatever movement, wherever it originates, that involves the services of physicians, who alone know what medicine is, what its possibilities and its limitations are; who know how, if mishandled, the practice of medicine can do more in the wrong way, can work greater harm on the public than any other one thing that can be imagined.

We feel in Chicago, at the headquarters of the American Medical Association, that the Texas State Medical Association is a great organization, a great institution. Your Society is represented in the House of Delegates by a splendid group of earnest, sincere and thoroughly qualified men, who enjoy the respect and the esteem of all of the members of that body. They have contributed greatly in many ways to the progress of scientific medicine in this country through their contributions toward the promotion of the aims and objects of the American Medical Association, and I am glad to stand here, Mr. President, and acknowledge my own personal gratitude for the splendid service that the members of the medical profession of this state who have participated actively in the affairs of the National Organization, have rendered medicine and the public good of this nation. I am very happy to be here. I am grateful, indeed, to you for your courteous reception and for your kindly hearing. (Applause.)

Vice-President Griffin: Dr. West, we appreciate your being here. We appreciate the work you are doing with the American Medical Association, which has no equal. I believe history will bear us out in that, and we thank you. (Applause.)

There being nothing further on the Secretary's desk, adjournment was had until Wednesday evening, at 8:00 o'clock.

Tuesday, May 14, 1940

MINUTES OF THE OPENING EXERCISES AND FIRST GENERAL MEETING

The Seventy-fourth Annual Session of the State Medical Association of Texas was called to order at 10:00 o'clock a. m., Tuesday, May 14, 1940, in the Crystal Ball Room, Mezzanine Floor, Baker Hotel, Dallas, Texas, by Dr. George A. Schenewerk, Chairman of the General Arrangements Committee.

Dr. George W. Truett, Pastor, First Baptist Church, Dallas, delivered the invocation.

Dr. Curtice Rosser, President of the Dallas County Medical Society, delivered the address of welcome, as follows:

Address of Dr. Curtice Rosser

It is my very pleasant privilege, as spokesman for the more than five hundred members of the Dallas County Medical Society, to welcome to this city the members and guests of our great Association.

For some years before 1876, a small organization known as the Dallas Medical Society, which held its meetings once a week at the offices of different members—usually above drug or dry goods stores, gave a few doctors then in Dallas opportunity for fraternal consultation. On its membership roster were such men as Thurston, Allen, Sutton, Cornelius, Graham and Armstrong. Among the pioneers whose names were added to the list, as time went on, were Leake, Carrington, Chilton, Eagan, McLaurin, Pace, Gibbs and Wiley. The admission fee was $1.00 and the dues fifty cents per quarter.

Your host Society, the Dallas County Medical Society, was founded sixty-four years ago with a membership of seventeen physicians. Both the Society and its dues have grown steadily throughout the years which have intervened, in stature and, we trust, in scientific attainment. Since 1903, it has always been a loyal component part of our state body, and it delights us to have this opportunity to show our respect for organized medicine and our genuine friendship for the doctors and doctors' wives of Texas.

The State Medical Association had its origin in 1853, eighty-seven years ago, when a little group of fifteen physicians met in Austin, Texas, to bind themselves into an organization for the advancement of medicine and medical science. The undertaking was one which required courage and determination. Texas had been a member of the Union for only eight years; "Uncle Tom's Cabin" and "My Old Kentucky Home" had appeared only the year before; Commodore Perry was just gaining admission to Japan for Western intercourse, and the national debt was a mere sixty-six million dollars.

The doctors who attended a state meeting did not spin over paved roads in twelve cylinder cars, nor lean back in plush seats on streamlined trains—they rode horseback, crossed swollen streams at fords and camped along the road when night came. Stage coaches were available, of course, and there was even one railroad, which had been in operation for two years. The Buffalo Bayou, Brazos and Colorado Railroad, however, was only thirty miles long and was, therefore, of little value in transporting the physicians of this vast state in 1853. The meetings were, as a result, not constant up to 1869, but from that date the State Association has met annually. It was not until the early part of this century that our Association was organized on its present basis. Prior to this time, such county societies as existed were independent and owed no allegiance to the state organization. In 1903, in keeping with the recommendations of the American Medical Association, the county society became the unit of organization, with only one society in each county or group of counties, and membership in these units became the basic requirement for membership in the State Association. From the small beginnings which I have recounted, the organized medical profession of Texas has grown to its present giant size. Nearly five thousand physicians are now enrolled under the banner, and two thousand of them are expected to join with us this week in serious study of our profession's pressing problems.

A great medical organization during the past year was forced to change its charter, which previously stated its purposes as "social and scientific," by omitting the word "social," in order to avoid government taxation and New Deal investigation. It must be understood, therefore, that this meeting is not officially for social purposes; but, unofficially, please understand that when the time comes to turn from labor to refreshment, your host Society has prepared a series of entertainments which we expect you to enjoy and which will, we hope, permit the renewing of old friendships and the establishment of new ones. Thank you. (Applause.)

Chairman Schenewerk: At this time it gives me pleasure to present the one who represents our greatest help, and by that, of course, I mean our wives. I take pleasure in presenting Mrs. L. S. Thompson, President of the Woman's Auxiliary to the Dallas County Medical Society. (Applause.)

Address of Mrs. L. S. Thompson

On behalf of the Woman's Auxiliary to the Dallas County Medical Society, I bring you greetings. We are honored, indeed, to have such a distinguished group visit us, and may I extend to you an old fashioned welcome, that of a cheery smile, a glad heart and a warm handshake. We have planned for your entertainment many social functions. We hope that you will join us and make all of these a grand success with your attendance. You will find these listed in your programs and we hope you will take advantage of all of them. We hope that you enjoy yourselves every minute that you are here, and that your visit may long be remembered. For your pleasure, we are holding open house in Suite No. 1620, Baker Hotel, and you are invited to come. We are serving refreshments. There are many pleasant surprises for you there, and we want you to come and meet each one and shake hands. We are glad to see you. (Applause.)

Chairman Schenewerk: I take pleasure at this time in presenting to you the one who represents our ladies all over the state. I am sure you have learned to know her as I have, the smiling lady of genial disposition, who seems some way or other to always be able to say just the right thing. I think it just comes natural for her. It is with pleasure that I present the President of the Woman's Auxiliary to the Texas State Medical Association, Mrs. S. H. Watson. (Applause.)

Address of Mrs. S. H. Watson

Representing the Woman's Auxiliary to the State Medical Association of Texas, I bring you greetings, with the assurance that by no means has this meeting prompted our thoughts and consideration of you. The theme of my addresses throughout the year has been: "The Responsibility of the Woman's Auxiliary to the State Medical Association." Our plan has been to be helpful to you. One's mental attitude has extraordinary influence upon all contacts one is privileged to make.

Right thinking is simply proper control of our intelligence, and from intelligence we receive power, and from power we receive faith, faith in one's self, in humanity and in God. In our devotion to the Medical Association, we have endeavored to so in-

form ourselves as to be able to accept or refute the many new theories constantly coming before the medical profession. And, if we can not live without our chosen companions and if we are surrounded by affection and interest that gives the charm to our lives, how careful we should be to meet such love and sympathy with corresponding love and thoughtful sympathy, so as not to accept everything and give nothing in return.

Because of our sincere belief that we stand for more than appears, we solicit the unstinted interest of the members of the State Medical Association to aid us in our slogan: "Every Doctor's Wife a Member." Every doctor's wife should be a member of the Woman's Auxiliary to the State Medical Association, first from a sense of duty and loyalty, and second, from love and sympathy. To satisfy my knowledge as to the definition of the word Auxiliary I turned to Webster's New, Unabridged Dictionary, and this is what I found: "An Auxiliary is a boat equipped with an engine or other power to supplement the motive power of sail, an aid, help, an assistant, a confederate," and that is exactly the prerogative of the Woman's Auxiliary relative to the State Medical Association. We are the additional motive power of sail, an aid, a confederate, an assistant—true brotherhood has no higher expression than that exemplified by fair play and helpfulness.

I read a pretty story the other day. I am going to tell it to you. In the beginning, God made Heaven and Earth, without form and void, and darkness lay over the face of the deep, and God said, "Let there be light," and lo! came softly stealing out of the East the first red and white rays of the morning sun, growing brighter over the Universe He had created, until the first day shone.

That the world might not be in darkness, He set the stars in the blue firmament of Heaven and they sparkled as the first night fell on the new born world. The red, the white and the blue were symbols of God's first thought when he made for us the world, and lighted it by the red and white rays of the morning sun, and the stars set in heaven's blue at night. These three colors are so enshrined in the hearts of men that they are found in the flag of almost every nation, from the oldest kingdom to the youngest republic, but they reach their height of beauty and significance in the Star Spangled Banner of our fair land. By some happy inspiration we have endowed these colors with beautiful significance, like rays of light they penetrate our souls. Red for love, white for purity and blue for fidelity.

In the beginning, like the earth, the medical profession was without form, and darkness lay over the face of the deep, but the pioneer medical men, with their godlike spirit said, let there be light, and lo! came softly stealing out of the East the first red and white rays of the morning sun. Hospitals were built, and so that the world might not be in darkness, research laboratories were established, and for stars, men devoted to their profession were set in the blue firmament of heaven where they sparkled as the first night fell on the new born world. The advancement of the science of medicine bears out the traditions of God's first thought. Like rays of light the progress of the profession has penetrated our souls; as a result of the advancement, we have an organization known as the Medical Association, whose red rays stand for love, white rays for purity of practice, and blue rays for fidelity to profession.

Some twenty-two years ago, the need for the additional power of sail was felt. The aid, the confederate, came into being, known as the Woman's Auxiliary to the State Medical Association of Texas. And may the future prove us such builders of records as will reflect credit on our organization and make us glad and proud of any part we might have in the reflected rays of the red, the white and the blue lights.

And now, as I look into your gracious faces, I ask reverently and fervently for the blessings of our country. May it ever be a stronghold of peace, may contentment reign within its borders, and health and happiness within its homes, and may the bonds of friendship be strengthened throughout the medical profession and, lastly, may I ask that the names of the members of this organization be inscribed in the book of life, and grant us a year of prosperity and joy. I ask all of this in the name of the Highest.

Chairman Schenewerk: On this occasion we are to present our past presidents. We look to them as we do our parents. We have looked to them as teachers and for guidance. We take this opportunity of honoring them. I am not capable of presenting these distinguished gentlemen. I have asked our own esteemed past president, Dr. C. M. Rosser, to do the honors.

Presentation of Ex-Presidents

Dr. C. M. Rosser: It would, of course, give me great pleasure and satisfaction could I have the time to introduce each of these distinguished gentlemen with appropriate remarks, but the proprieties of the occasion prohibit. I will say what I would want to say by quoting from a sage and great philosopher and humanitarian: "Glories of the future, I salute you. Glories of the past, I salute and present you." And as I call the names of the past presidents of this Association, they will simply rise and be recognized.

In various communities there are those who have identified and honored their places of residence. I never think of Gainesville without thinking of Gilchrist. When I think of Denton, I think of Inge. When I think of Cuero, I think of John Burns. And now we must speak of Red when we think of Houston, although other distinguished representatives live there. All of these have gone to the shadows with other nobles of the past. There are those who have reached the position in life when they do not need to be identified by other than their names. Beginning on my left, San Antonio, J. H. Burleson. (Applause.) Houston, John T. Moore. (Applause.) Kerrville, S. E. Thompson. (Applause.) Dallas, John O. McReynolds. (Applause.) Mineral Wells, John H. McCracken. (Applause.) Daingerfield, D. J. Jenkins. (Applause.) And there is nothing the matter with Hannah, so I present him now, Dallas. (Applause.) You have heard of the little place called Hearne. I will tell you who made it, who maintains its reputation, H. W. Cummings. (Applause.) This State has a capital. We think of Austin when we think of the capital, but I will show you one who has graced it and graced it well, Joe Gilbert. (Applause.) A little farther down the road there is a placed called Lockhart. You haven't been there, perhaps, but I will show you one who has been there a long time. When you think of Lockhart you will think of A. A. Ross. (Applause.) There are many reminiscences that are connected with Waco, but you won't forget, if you haven't already had it impressed on you, that H. R. Dudgeon lives there. (Applause.) And who shall think of Galveston, the great medical institution there, and Houston, the port nearby, without thinking of M. L. Graves? (Applause.) And one of the younger brilliant lights that has already risen and is shining well, throwning light upon Houston, E. W. Bertner. (Applause.) And with him, on his right, that delightful personality that we also think of when we think of Houston, John H. Foster. (Applause.) And, of course, the dessert comes last. (Laughter.) My long

time, noble, strong and always dependable compatriot, Edward H. Cary, of Dallas. (Applause.)

Chairman Schenewerk: There never was such a presentation as we have had here this morning. It now becomes my privilege and pleasure to present one whom I have learned to love and admire very much. I want to say this one thing about our next speaker, our President, in poetry because it fits him. It is from the writings of Ella Wheeler Wilcox.

"There are only two kinds of people in the world today,
The people who lift and the people who lean,
And whenever you find the world's masses
You will find them divided in just these two classes.
And you will behold also, I ween,
Where there is one who lifts,
There are twenty who lean."

Our President is one of our lifters of all time. We of the younger generation appreciate that particularly. He has taken an active interest in us. He has taken an active interest in all. And so, I consider it one of the great pleasures of my life to present the President of our Association, Dr. Reeves. (Applause, the audience rising.)

President Reeves: I have had many introductions. I am sure I have never had one I appreciate more than this one, and I hope that in a way I will be able to prove worthy of the fine things he has said of me.

President Dr. L. H. Reeves, of Fort Worth, then delivered his annual address, which address apppears in the original article section of this number of the JOURNAL. (Applause.)

President Reeves: At this time I wish to present to you Dr. Sam E. Thompson, one of the past presidents of this Association, who has a message of much importance to the entire Association. (Applause.)

ADDRESS OF DR. S. E. THOMPSON

I want to talk to you about the library of the State Medical Association of Texas, which has during the last few days been converted into the "Memorial Library of the State Medical Association of Texas," and the purpose of which is to serve not only the medical profession but the people of Texas, or any organization in Texas that may need it. We have a library at this time that is doing a wonderful work and serving a vital purpose, but we feel that as Texas grows and as the medical profession grows, our library must grow with it. We realize that our library must develop, broaden and answer its purpose, or it must go out. It is doing a vital work now. It is serving the medical profession with the latest things in medicine that they may need.

This past year more than seven hundred packages on subjects on which doctors wanted to be enlightened went out to the medical profession and to others requiring that information, immediately on request. Regardless of where you may live you may want something on some rare condition from which a patient suffers. You can wire to Fort Worth today and tomorrow morning you will have it. Such a service is vitally important to the medical profession and through it to the people, and to various organizations, womens' clubs, student organizations, universities, or any one who is interested in any phase of medical activities, in medical economics, in socialized medicine, or in anything that touches the welfare and interests of the people. The greatest possible safety that can be thrown around a sick person is the efficiency of his medical service, and the greatest danger to which he may be submitted is inefficient medical service.

Looking forward to the idea of increasing the value of the medical library of this State, we have just brought into existence a special permanent organization. Your President has appointed a Library Committee. Its activities are limited to the solicitation of funds for the support of a medical library. The personnel of the Library Committee is, Dr. Sam E. Thompson, Chairman, Dr. W. E. Bertner, Vice-Chairman, and Drs. Ralph Homan, of El Paso, Jim Travis, of Jacksonville, and Julius Krueger, of Lubbock. This committee has nothing to do with the administration of the proposed library fund. As soon as the funds are offered and given to the library, they go into the hands of our Trustees, who constitute the Library Association. And I want to call your attention to the fact that the corpus of the fund is to remain forever inviolate. It cannot be touched or spent for any purpose. Only the income from the fund is to be used, and that only for the promotion, advancement and development of the library.

Any institution composed of men, which has for its purpose the education and development of men, must have for its heart and soul an adequate library. Our colleges, universities, medical societies, any organization for the education, betterment and development of men, must rest on the efficiency and extension of its library. Our library will be supported largely by donations. Already, during this meeting, we have been given $3,000.00. These donations may be given in the form of memorials. We may memorialize an individual; we may memorialize an institution; we may memorialize an organization; we may memorialize anything that the donor has in mind when he gives the money. And we hope by the cultivation and development of a public sentiment in favor of the establishment of an adequate library, to spread the service over this nation like a fire over a prairie. (Applause.)

President Reeves: Dr. Cary will introduce our next speaker. (Applause.)

Dr. E. H. Cary: President Reeves, Ladies and Gentlemen: In 1847 the American Medical Association was born, under President Tyler. In 1902 it was reorganized and made one of the greatest democratic organizations of all times. A great many statesmen have prevailed, and the statesmanship involved has created a marvelous institution. If the childhood was between 1847 and 1902, there was a period of adolescence from 1902 to 1924. During that period, great councils came into being; medical education was so handled that this great country of ours became first in medical education. I could go on and tell you any number of activities of this great organization, and what they have accomplished, but time won't permit. After 1924, we might speak of the adult age of the organization. At that time, our distinguished guest and speaker became its Secretary and General Manager, and when 1927 came, and this Committee on the Cost of Medical Care was organized, the American Medical Association was at first limited to one representative on the committee. For that one representative we selected the Secretary and General Manager. And during the trying period of some five years it came to pass that he rallied around him some eight distinguished physicians, and they were together responsible for that now famous minority report. That was the beginning of a fight that has extended over a long period of time. During all this time this man has been one of the stabilizing influences, and one of those in the forefront of battle. I present to you one of the medical statesmen of our time, one of the leaders whom we delight to honor, Dr. Olin West, the Secretary and General Manager of the American Medical Association. (Applause, the audience rising.)

Dr. Olin West then delivered an address on "The American Medical Association and the Public," which address will be published in an early number of the JOURNAL.

President Reeves: At this time I will ask Dr. M. B. Whitten, of Dallas, to introduce our next speaker.

Dr. M. B. Whitten: It is my honor and pleasure at this time to introduce to you for his initial appearance before this organization, Dr. Frank J. Heck, of the Mayo Clinic, Rochester, Minnesota, who will open the scientific part of this program with a discussion of "Iron Requirements in Childhood and Adult Life."

Dr. Frank J. Heck, of Rochester, Minnesota, then delivered an address on "Iron Requirements in Childhood and Adult Life," which address will appear in an early number of the JOURNAL.

President Reeves: Dr. J. M. Hill will introduce our next guest speaker.

Dr. J. M. Hill: It is a real privilege and a pleasure to introduce Dr. Roy R. Kracke, professor of Pathology, Emory University School of Medicine. Dr. Kracke will speak on "The Effect of Sulfanilamide and Related Compounds on the Blood."

Dr. Roy R. Kracke, of Atlanta, Georgia, then delivered an address on "The Effect of Sulfanilamide and Related Compounds on the Blood," which address will appear in an early number of the JOURNAL.

President Reeves: Just one minute, please. The Secretary has an announcement he wants to make.

The Secretary presented a letter from Ex-Governor Dan Moody, declining an invitation to be a guest, from which a paragraph is quoted: "Doctors as a rule are great company—I do not know of any exception to the rule, and a lawyer can always learn a lot from a good doctor. I have engagements for next week which make it impossible for me to accept your invitation, but I do appreciate the compliment you have paid me in inviting me."

There being no further business to come before the meeting, adjournment was had.

MEMORIAL SERVICES

The general meeting set aside for Memorial Services was convened in the Grand Ball Room, Hotel Adolphus, Dallas, at 6:00 o'clock p. m., Tuesday, May 14, 1940, with Dr. John M. Furman, of Fort Worth, Chairman of the Committee on Memorial Exercises, presiding.

Chairman Furman: Ladies and gentlemen, this annual memorial hour is a sacred one to us. We like to think that in these gatherings we have the easy familiarity of the home, the affectionate informality of the family circle.

The invocation was offered by Rabbi Dr. Henry Raphael Gold, of Dallas.

"Lead Kindly Light" and "Crossing the Bar," were then rendered by the Bell Canto Quartet.

Mrs. S. F. Harrington read a list of the deceased members of the Woman's Auxiliary, as follows:

ADDRESS OF MRS. S. F. HARRINGTON

I light this candle as a memorial to those whose lives were like a light in the world about them; to those women who as friends cast their warm radiance generously; to those who, though they have passed on, still glow in our hearts as helpful neighbors who made bright the way; to those doctors' wives who as helpmates reflected the glory of the flame of service. So that their light may continue to shine, in lieu of flowers we present a memorial fund to the Woman's Auxiliary to the State Medical Association of Texas, in memory of:

[redacted]

Mrs. Earnest Becker, Brenham.
Mrs. C. A. Cobb, Beaumont.
Mrs. A. B. Cox, Greenville.
Mrs. J. H. French, Wichita Falls.
Mrs. Joe M. Griffith, Tyler.
Mrs. T. M. Harrell, Corpus Christi.
Mrs. J. T. Harrington, Waco.
Mrs. R. Henry Harrison, Sr., Bryan.
Mrs. Grace Norton Hargis, San Antonio.
Mrs. Gordon Hinds, Houston.
Mrs. Frank S. Littlejohn, Marshall.
Mrs. H. A. Mahaffey, Hillsboro.
Mrs. Carrie Giraud McCorkle, San Antonio.
Mrs. J. W. Pittman, Temple.
Mrs. Hattie Weber Priester, Houston.
Mrs. Ada Poe Singleton.
Mrs. W. I. M. Smith, Nacogdoches.
Mrs. L. K. Tainter, Waco.

[redacted]

Chairman Furman: A list of the deceased members of the State Medical Association will now be read by Dr. Holman Taylor, Secretary.

Secretary Taylor: There have been sixty-two members to die during the past year; seventy-nine reputable physicians who were not at the time of their death members of this Association, died during the year. Our total membership is 4,348. The following are those who died while members of the Association:

[redacted]

Armstrong, Dr. Edward M., Houston.
Braly, Dr. D. B., Troup.
Brittain, Dr. B. F., Putnam.
Bryan, Dr. G. T. L., Abilene.
Burnett, Dr. Jas. H., Kopperl.
Byrd, Dr. Edwin L., Aransas Pass.
Callaway, Dr. A. N., Tyler.
Chandler, Dr. C. E., Hamilton.
Childress, Dr. A. J., Jefferson.
Cox, Dr. Robert L., Houston.
Duckett, Dr. J. D., Houston.
Dunn, Dr. W. W., Beaumont.
Flickwir, Dr. A. H., Fort Worth.
Freeman, Dr. Benjamin H., Garland.
Fuller, Dr. Fred A., Jacksonville.
Gain, Dr. O. O., Dublin.
Gandy, Dr. J. H., Lipan.
Gant, Dr. C. B., Graham.
Gauldin, Dr. R. J., Dallas.
Goldstein, Dr. Louis, Beaumont.
Graham, Dr. L. H., Waxahachie.
Griffith, Dr. Joseph M., Tyler.
Harlan, Dr. Wm. J., Bartlett.
Harris, Dr. Dennis P., Beaumont.
Herrington, Dr. Joshua L., Mullin.
Hickle, Dr. W. F., Kenedy.
Horney, Dr. Harlan, San Angelo.
Killough, Dr. R. S., Amarillo.
King, Dr. C. L., Whitesboro.
King, Dr. J. C., Harrold.
Kirkpatrick, Dr. D. F., Lewisville.
Knight, Dr. Harry O., Galveston.
Lasater, Dr. Robert H., Mesquite.
Lowry, Dr. Willis E., Sr., Laredo.
Masterson, Dr. James P., Mauriceville.
McDeed, Dr. Winfield G., Houston.
McDonald, Dr. J. E., Kerrville.
Norris, Dr. Ray S., Sanatorium.
Pedigo, Dr. H. B., Beaumont.
Priest, Dr. R. C., Rusk.
Red, Dr. S. C., Houston.
Richardson, Dr. David P., Henderson.
Rives, Dr. C. T., Winters.

Robertson, Dr. Harry S., Weldon.
Robinson, Dr. Clovis H., Crane.
Rodarte, Dr. Domitilio, El Paso.
Rosborough, Dr. Jas. F., Marshall.
Sealy, Dr. T. Richard, Santa Anna.
Shelton, Dr. J. H., Kingsville.
Smith, Dr. James W., Poth.
Smith, Dr. R. C., Wichita Falls.
Stevenson, Dr. Herbert E., El Paso.
Tappan, Dr. John W., El Paso.
Toland, Dr. Wm. A., Houston.
Trimble, Dr. Theodore F., Corpus Christi.
Tucker, Dr. Frederick F., Nacogdoches.
Turner, Dr. Fred A., Waco.
Walsh, Dr. F. C., Hunt.
Walthall, Dr. Thomas J., San Antonio.
Weller, Dr. Ralph E., Electra.
Wilson, Dr. Roy D., Houston.
Worley, Dr. Preston, San Antonio.
Wornell, Dr. J. M., Blum.
Yates, Dr. John S., Rosenberg.
Young, Dr. Warren G., Port Arthur.

The following are the names of reputable physicians who died while not members of the Association:

Albaugh, Dr. F. B., Jacksonville.
Barclay, Dr. Robert Lee, Kennard.
Bechtol, Dr. E. C., Grapevine.
Bradley, Dr. J. T., Dalworth Park.
Briscoe, Dr. J. O., Weslaco.
Brower, Dr. D. R., Mercedes.
Bryan, Dr. C. F., Corsicana.
Canant, Dr. E. E., Bassett.
Cantu, Dr. Conrado Garza, Laredo.
Carlson, Dr. Oluf F., Fort Worth.
Carter, Dr. James C., Denison.
Casey, Dr. Z. W., Albany.
Chunn, Dr. Minnie Bell, Beaumont.
Cooper, Dr. John D., Brookeland.
Cruikshank, Dr. R. D., Goose Creek.
Davis, Dr. W. H., Arlington.
Delambre, Dr. J. J., Houston.
Dodd, Dr. D. L., Aspermont.
Dudley, Dr. Nicholas L., Goose Creek.
Duke, Dr. H. W., Amarillo.
Eastham, Dr. G. W., Fort Worth.
Evans, Dr. E. A., Hope.
Falls, Dr. W. S., Henderson.
Gee, Dr. J. N., Bethel.
George, Dr. Wm. F., San Benito.
Gober, Dr. J. M., Beaumont.
Griffin, Dr. Ira A., Snyder.
Hamer, Dr. Tristam B., Carrollton.
Hardeman, Dr. Wm. E., Annona.
Haw, Dr. W. H., Atlanta.
Hazelwood, Dr. W. R., Austin.
Howell, Dr. Moses S., Greenville.
Hume, Dr. Lea, Eagle Pass.
Hutchinson, Dr. W. J., San Antonio.
Jackson, Dr. John D., Perryville.
Kelsey, Dr. C. C., Blooming Grove.
Kimmins, Dr. R. L., Meridian.
LaRue, Dr. Robert L., Eustace.
Long, Dr. Wm. E., Pearland.
Lunsford, Dr. L. J., Palestine.
Maple, Dr. Lucian E., Morgan.
Martin, Dr. Thomas A., Loraine.
Maxwell, Dr. Frank A., Austin.
McDonald, Dr. W. H., Newsom.
Mickle, Dr. John W., Wichita Falls.
Miller, Dr. J. W., Avinger.
Moore, Dr. T. A., Plainview.
Moorehead, Dr. Thomas R., Bertzon.
Osborne, Dr. W. M., Pinehill.
Parks, Dr. Geo. W., Canton.
Pennington, Dr. W. H., Mineral Wells.
Plotts, Dr. P. B., Bedias.
Price, Dr. Chas. T., Point.
Putman, Dr. Ellie H., Cuero.
Quinn, Dr. W. J. Dallas.
Redlinger, Dr. Eugene A., Dallas.
Reid, Dr. Jack Hood, Wharton.
Robbie, Dr. Mary King, San Antonio.
Rochelle, Dr. R. E. L., Amherst.
Rousseau, Dr. J. F., Beckville.
Sanders, Dr. Aaron D., Corsicana.
Seale, Dr. J. J., Dallas.
Simpson, Dr. R. H., Dallas.
Staples, Dr. Tom O., Wylie.
Starnes, Dr. M. H., Lubbock.
Stidham, Dr. Chas. Z., Memphis.
Terrell, Dr. Frederick, San Antonio.
Thomson, Dr. Wilbur Fisk, Houston.
Titterington, Dr. Jesse B., Dallas.
Umberger, Dr. Elmer K., Flatonia.
Waddle, Dr. D. R., Greenville.
Warren, Dr. S. A., Brookston.
White, Lt. Col. Wm. M., Fort Clark.
Whiteside, Dr. Robt. B., Lott.
Wiesh, Dr. Moses, San Antonio.
Williams, Dr. Will T., Houston.
Wilton, Dr. H. F., Nocona.
Wrenn, Dr. Wm. S., Margaret.
Wylie, Dr. D. C., Aspermont.
Yates, Dr. J. D., Orange.
York, Dr. Frederick A., Navasota.

Dr. John M. Furman then delivered the memorial address, which is published in the Original Article section of this number of the JOURNAL.

The benediction was pronounced by Chairman Dr. Furman.

SECOND GENERAL MEETING

The second general meeting of the Association was called to order at 3:15 p. m., Wednesday, May 15, 1940, in the Grand Ballroom, lobby floor, Hotel Adolphus, by President L. H. Reeves.

AWARDS FOR BEST SCIENTIFIC EXHIBITS

President Reeves: First on the program is the award for the two best scientific exhibits displayed at this session of the Association. The committee making this award is a secret committee. The identity of its members was unknown to anyone until today. They have spent the past two days studying the exhibits. Dr. Lee Rice, of San Antonio, Chairman of the Committee on Scientific Awards, will now make the awards.

REPORT OF THE COMMITTEE ON SCIENTIFIC AWARDS

Dr. Lee Rice: This is the report of the Committee on Scientific Awards. The members of the Committee on Scientific Awards wish to emphasize the educational and teaching value of the many excellent exhibits displayed at this session of the Association. The exhibits represent a great deal of work and effort on the part of those who participated, and the selection of those to receive awards was very difficult.

As a basis for judging the exhibits, the main criteria were, one, originality; two, method of presentation; three, teaching value of the display, and four, the efforts in the background that they represented.

With the last thought in mind, it was decided that the first award should be given to Dr. J. M. Hill and associates, of Dallas, for their work on Concentrated Plasma. The consummation of this work has proceeded through many difficult steps, and it was well presented in the exhibit.

Dr. Bedford Shelmire, Dr. J. G. Brau and their associate, Mr. H. L. Graham, were finally selected for the second award, on the demonstration of Con-

tact Dermatitis from Weeds, not alone for the beauty and excellence of presentation, but because a new method was presented, and obvious thought was given to its teaching value. Mr. Graham is a botanist, associated with one of the high schools in Dallas, and it seems that he has done some very careful work.

The committee thought that many exhibits deserved honorable mention, and more particularly those which have received previous awards, but since it was necessary to select two, it wishes to present this honor to Dr. Dudley Jackson and his associates, for their Comparative Study of Human and Animal Neoplastic Disease, and to Drs. Duncan, Seybold, Hoskiss and Kahler, for their Dissections of Normal and Abnormal Spines to Illustrate Sites of Compression and Distortion of Associated Nervous Structures.

The committee wishes to thank each exhibitor for the splendid work that he has done, and to further encourage individual and small groups to continue this fine teaching service to the medical profession of Texas. It regrets that the scientific exhibits were rather isolated this year, and hopes that they can always be made readily available to the largest possible number.

Respectfully submitted,
LEE RICE, Chairman,
MAY OWEN,
C. F. CRAIN.

Now if Dr. Hill will come to the platform, it will be my pleasure to present to him the first award. Dr. Hill has been very active in research work, and I am sure this is richly deserved. (Applause.)

Now will Dr. Bedford Shelmire come to the platform? We would again ask the individual exhibitors to do their best work for teaching purposes, such as Dr. Shelmire and Dr. Brau have done, and I take pleasure in presenting the awards of Dr. Shelmire and Dr. Brau to Dr. Shelmire. (Applause.)

President Reeves: Next on the program is an address by Dr. Alan Brown, Professor of Diseases of Children, University of Toronto, on "A Consideration of Some Common Pediatric Problems." Dr. Alan Brown is the guest speaker of the section on medicine and pediatrics.

Dr. Alan Brown, of Toronto, Canada, then delivered an address on "A Consideration of Some Common Pediatric Promblems," which address will appear in an early number of the JOURNAL.

(Vice-President Dr. W. A. Lee assumed the chair.)

Dr. Joseph C. Beck, of Chicago, Illinois, then delivered an address on "Review of Sulfanilamide as an Aid to the Treatment of Eye, Ear, Nose and Throat Conditions," which address will appear in an early number of the JOURNAL.

Dr. Claude S. Beck, of Cleveland, Ohio, then delivered an address on "Extrinsic Lesions of the Heart," which address will appear in an early number of the JOURNAL.

Dr. Wilson Carter Williams, of Nashville, Tennessee, then delivered an address on "Public Health and the Practice of Medicine," which address will appear in an early number of the JOURNAL.

There being no further business to come before the meeting, adjournment was had.

MINUTES OF THE HOUSE OF DELEGATES

The House of Delegates met pursuant to adjournment, Wednesday, May 15, 1940, at 8:00 o'clock p. m. in the Empire Room, Lobby Floor, Hotel Adolphus, Dallas, with President L. H. Reeves in the chair.

REPORT OF REFERENCE COMMITTEE ON CREDENTIALS

Dr. Edwards: There are 62 checked in and more coming. We recommend that J. G. Sanders, of Brazos-Robertson, be seated in place of the regular delegate, Dr. R. B. Grant, who has had to leave. Dr. Grant writes, "I find that I must return home at once and request that my alternate, Dr. J. G. Sanders, remain and be seated in my place. R. B. Grant, Jr."

Upon motion of Dr. Sweatland, seconded by Dr. Cummings, Dr. J. G. Sanders was seated as a delegate.

Upon motion of Dr. Cummings, seconded by Dr. Miller, the roll call was dispensed with.

Dr. R. B. Homan, Jr., then presented a supplementary report of the Tuberculosis Committee, as follows:

SUPPLEMENTARY REPORT OF COMMITTEE ON TUBERCULOSIS

At a meeting of the Committee on Tuberculosis held Tuesday, May 14, 1940, the following matters were discussed, which we believe are of sufficient importance to be brought before this House of Delegates:

I. Dr. Howard E. Smith, Director of the Division of Tuberculosis of the State Health Department, presented a communication to the Committee relative to certain policies of the State Health Department regarding the control of tuberculosis. These matterms included:

(1) *Distribution of Tuberculin.*—It was pointed out that the State Health Department is now frequently called upon to furnish tuberculin to physicians, County Health Departments, Tuberculosis Associations, etc., for mass tuberculin testing in various communities. The Division of Tuberculosis of the State Health Department, wishing to coöperate with the State Medical Association, wanted certain policies set up as to who should and who should not receive this tuberculin. The following motion was adopted by your committee:

"That old tuberculin of dilution appropriate for tuberculin testing would be furnished only to counties with recognized health units, and with adequate nursing service for the necessary follow-up after the testing. The application for the tuberculin is to come from such County Health Department, to be delivered to and distributed by it."

(2) *A Tuberculin Demonstration Unit.*—Since the tuberculin test is being done more generally over the State, the Division of Tuberculosis has asked this committee if a demonstration unit of Tuberculin Testing should be set up by the Department, to teach the technic in areas where invited.

The committee felt that such a unit was unnecessary at the present time, and the proposition was tabled.

(3) *Post-Graduate Study on Tuberculosis.*—Inquiries have been received by the State Health Department from many physicians of the State desiring special training in the administration of artificial pneumothorax. It was pointed out that a recent survey by the Department revealed that there are now only about 100 physicians giving pneumothorax in the State. It was further shown that patients receiving artificial pneumothorax at the State Sanatorium, where they are treated for only nine months, were returning to areas of the State where no pneumothorax facilities were available and, therefore, these patients frequently found it necessary to travel long distances in order to continue treatment. Some patients abandoned treatment because of the unavailability of this service.

For the training of more physicians to do this

type of work, Dr. J. B. McKnight, Superintendent of the State Sanatorium, has agreed to give post-graduate instruction, using the excellent facilities of the State Sanatorium for teaching purposes. This institution agrees to provide room and board for physicians desiring this course of study.

While it is the opinion of this committee that short courses such as this would not thoroughly equip a physician to become a specialist in this field, it is felt that in the interest of public health and of the tuberculosis control program, some effort should be made to interest and train physicians to carry on the necessary collapse therapy in the more remote sections of the State. The following motion was therefore carried: "That this committee request the Committee on Post-Graduate Medical Education of the State Medical Association, coöperating with the Division of Tuberculosis and the State Health Department, to present a six weeks course on pneumothorax therapy at the State Sanatorium. Such course to be presented once during the coming year, and the class limited to eight physicians living in cities of under 10,000 population. In order to be eligible for this course, a physician must have fluoroscopic equipment in his office. There shall be no charge for this course, and no stipend shall be paid other than for room and board furnished by the State Sanatorium."

II. At the request of the Chairman of the Tuberculosis Committee, Dr. J. B. McKnight, Superintendent of the State Sanatorium, presented a report of the Sanatorium facilities of Texas, together with recommendations relative to increase in these facilities for the tuberculous. Dr. McKnight stated that there were some 4,000 deaths from tuberculosis in Texas in 1939, and only 2,500 beds available in the State. In the United States as a whole, there were 65,000 deaths, with 90,000 beds available. In other words, the ratio of beds to deaths in the United States is 3 to 2, while the ratio of beds to deaths in Texas is 2½ to 4. He believes that some twenty-five hundred more tuberculosis beds are needed in Texas, and recommends that these beds be built by the cities and counties of the State, to care for their indigent tuberculous.

He further recommends that a new State Sanatorium be built somewhere along the Rio Grande river area, for the care of the Latin-American population. In this connection, Dr. Smith stated that on the basis of the 1939 deaths from tuberculosis in this State, the following mortality rates, according to race, prevailed in Texas:

Anglo-Americans,	30	per 100,000.
Negroes,	94	per 100,000.
Latin-Americans,	165	per 100,000.

Dr. McKnight stated that a bill would be presented at the next session of the Legislature to authorize the building of a State Sanatorium for Latin-Americans.

A communication from Dr. Woldert, of Tyler, requesting the committee to urge the State to build one or two State Tuberculosis Sanatoria in East Texas, was considered, but in view of the fact that the major tuberculosis problem, as indicated by the above figures, is in the Latin-American population, which centers in southwest Texas, it was believed advisable to recommend that the institution be placed in that area. Therefore the following motion carried:

"That the Tuberculosis Committee of the State Medical Association believes that there are insufficient beds for the care of the indigent tuberculous in the State, and believes that 2,500 more beds are necessary. The committee recommends that the majority of these beds be provided by the individual cities or counties for the care of their indigent tuberculous in all stages of the disease. The committee further recommends that a new State Sanatorium for Latin-American citizens of Texas be built in southwest Texas, to receive patients in all stages of the disease, and that the Legislative Committee of the State Medical Association lend its support to the passage of the bill creating this institution."

Respectfully submitted,

H. F. Carman,
J. B. White,
Sim Hulsey,
Howard E. Smith.

President Reeves: This report will be referred to the Reference Committee on Scientific Work.

Secretary Taylor: I see a fraternal delegate from the Texas Public Health Association. I suggest that Dr. Beck present Judge Jackson. I have his credentials.

Dr. J. W. E. H. Beck: The Texas Public Health Association is proud of the fact that at the meeting before the last, it went on record that it would not consider any legislative matters until the same had been approved by the State Medical Association of Texas. (Applause.) The next thing I am proud of is to introduce to you Judge Guy C. Jackson, County Judge at Anahuac, who is the Fraternal Delegate from the Texas Public Health Association to the Texas State Medical Association. (Applause.)

ADDRESS OF JUDGE GUY C. JACKSON

I have a bad case of bronchitis, and I wouldn't go to see my local doctor about it because I know for a fact that he has had it for five years and I didn't see how he could do me any good. (Laughter.)

Dr. Beck has asked that I talk to you about what a public health program means to a county. In covering that subject, it will be necessary, of course, for me to use my own county and community as an example. After all, the meaning of health to the local area is primarily the work that each and every one of us is interested in, in as much as the local areas are the areas we must necessarily reach and educate in order to carry the health work on. During the past ten or eleven years, I have had the pleasure of serving Chambers county as Superintendent of Schools and County Judge. Naturally, I have come in contact with the health work that has been carried on by the State and federal governments, as well as the local agencies. I have become very much interested in the work. I find that we who endeavor to carry on the work are hindered and delayed from all sides, first, by the lack of funds, secondly, by the lack of interest of officials, and, third, by lack of interest of the citizens themselves. Therefore, the health work in the State of Texas has been held back to such an extent that we are far behind other states, and there is little hope of improving the situation under the present system.

The first efforts to promote a program of health should be in the schools, because in this manner we not only reach the coming generation, but teach and influence the present generation through their children; and, of course, in educating these children, a certain amount of the information which they retain is carried home and imparted to the parents, and a certain amount of information imparted to the parents is retained and used by them. The second step in the health work should be through the various officials of the County, State and Nation, and we all recognize the wonderful work which has been done by Surgeon General Thomas Perran in his fight on venereal diseases, and thirdly, we must have adequate laws whereby the health programs can be enforced. In all of the health work that is carried on, the medical profession is the moving force, and the doctors should prescribe the rules and be the leaders in the work.

Some eight or ten years ago, a few of the outstand-

ing citizens and officials of Chambers County realized the need and necessity of providing for our children's health by competent examinations and immunizations, and in the three principal schools of the county, these interested citizens sponsored health clinics, in which the local doctors graciously participated, and which brought about many corrections of children's defects and quite a number of immunizations, particularly of the children whose families could afford to pay the cost. This work continued year after year, until about three years ago, when the desire of the people for better health conditions in the schools and communities grew to the extent that the commissioners court provided them with the services of a county health nurse, which services have been carried on continuously to date. During this time there have been provided 1,072 smallpox immunizations, 926 diphtheria immunizations, 1,130 typhoid immunizations, and over a thousand tuberculosis skin tests—this out of a total scholastic population of about 1,800. Now, these figures do not represent the entire number of students immunized in Chambers County, but only those who have been immunized under the county sponsored program. The children not listed in these figures were immunized by the family doctor in the usual and customary manner. In fact, 95 per cent of the school children of Chambers County are now immunized against diphtheria, typhoid and smallpox, and we do not know of a single person attending school who is a tuberculosis carrier. This immunization work is being kept up year after year in an effort to make and hold the children of Chambers County 100 per cent immunized against the common diseases heretofore mentioned, and we are now entering into a program which will endeavor to find and correct some of the defects in hearing and eyesight in our indigent children.

At this point I would like to pay a compliment to the doctors of Chambers County. After my some ten or twelve years of work there, I would like to say that I think they are the finest doctors in the State. I know they are as public spirited as any because they have come forward and given their time to take care of those indigent children in our schools who we were unable to take care of previously. I particularly want to compliment Dr. Shearer, who is one of your delegates, because I know that in the past few years he has devoted practically all of his time to public health work, and that he has been a moving force and a wonderful influence in our county.

In stating the many benefits which Chambers County has derived from its health work, I would like to say that as yet we are not doing our full part. For example, during the year 1938, we spent the sum of $675.00 per month for the purpose of eradicating the fever tick from the livestock, and during that same year we spent the sum of $100.00 per month to provide a health service for our people. We further provided our county with more than 80 school teachers, to educate our children, yet, while knowing body and mind are inseparable, we provided them with only one health nurse to educate them in their health problems. And in looking over the appropriations of the State and federal government for education, I find that they are about the same in ratios and proportion. For instance, in Chambers County, it costs us approximately $100.00 per child per year to operate our public schools, and the operation of our health program has cost less than $1.00 per child, per year. This is entirely too wide a variation. We should spend at least one-tenth as much for our health as we do for our school work. That is, at least $10.00 per child, and with $10.00 per child we could establish a health system and program in Chambers County that would be unparalleled in history. And after all, is not the teaching of health just as important as the teaching of any other subjects? We take a child through our schools and educate him to make a living in whatever vocation or occupation he might choose, improve his mind to such an extent that he is capable of competing with his fellow man, and fail to provide him with sufficient health safeguards, that he may grow up with a healthy body. Neither you or I would go forth to haul a load of gold on a rickety wagon. We would provide a good wagon and adequate power to pull it; yet we do not apply this idea to ourselves, in storing our minds with knowledge, which is gold to us, and at the same time tearing the wagon to pieces that is carrying the gold.

One of the handicaps to the furtherance of an adequate health program for our people is the fact that we have fostered the idea that the mind exists as something separate from the body, and that physical health is different from mental health. In other words, we have treated the individual as a group of special, separate, and largely unrelated parts. We know that an individual grows and develops as a whole and that he is inseparable and can be divided only to the detriment of his developmental process.

There are many of us here who would like to have an adequate and competent health program immediately, and enforced by law, and this could be very easily done under the dictator method, but we realize that we are free American people and cannot just pass laws or enforce regulations on the people which they do not believe or understand. The only sure way of carrying out the health movement is to educate our citizens on the need of health, and the only way to educate our citizens on the need of health is to sell them on the idea, and how it applies to themselves. Under our free, democratic, American principle of government, the greatest success is through salesmanship. If a man wants the American citizen to buy an article he manufacturers, he sells him on the idea; that is, he creates in him a desire to possess the article that he manufactures. The same principle obtains when a man is running for public office. He has to sell the people on the idea that he is the best man to serve them. The same principle was applied to education. The American people were sold on the idea, and it has been constantly drilled into them that for their children to participate in the pleasures and benefits of this life they must educate themselves so that they can obtain it, and so they were willing to vote taxes on themselves for the purpose of education. When we who are striving to put a health program across we must realize that our work is to sell John R. Citizen, from the forks of the creek to the middle of the city, upon the idea of health. We will then find that our work is already done.

You gentlemen of the medical profession must take the lead in this great work, and to put it across, and when you sell the American population, or a majority of them, on the need of competent health work, the ways and means will be provided by governmental agencies.

I realize that in recent years there has been quite a bit of discussion about socialized medicine, or state medicine, as it is sometimes called, and I want to say here and now that I am opposed to socialized medicine, or state medicine, and too often public health work is classed as socialized or state medicine. This is entirely incorrect, because the health work can and should be carried on without interfering in any way with the independent and individual practice of medicine.

As an individual and layman, I ask you to take the lead in this work, and first request of the legislature an adequate appropriation to carry it on; or even better, have the laws changed so that the counties can vote upon themselves a tax for this work, the same as they do for the schools. Secondly,

I ask that you talk to the officials of your county, as well as the state officials, at every reasonable opportunity, and endeavor to impress on them the need for an adequate health program. Third, I ask you to talk to the citizens of your community, on proper occasion, and as you meet them in daily life, and endeavor to explain to them the benefits they will receive from an adequately financed and operated health program. And fourth, I ask that you talk to the Senators and Representatives from your district, and impress upon them the necessity of having adequate laws to enforce the much needed health rules and regulations.

In the past few years you have seen many programs put across in the United States. Some of them have been mishandled, and some of them have been handled by the wrong set of people. I honestly believe, from my observation of the State of Texas and what little I have seen of the United States in recent years, that a general feeling is being created for an adequate public health program, and I want to see the medical profession sponsor that program. Don't let it be led by laymen, because a layman doesn't know how. (Applause.)

President Reeves: Do we have any more fraternal delegates?

Dr. C. E. Scull: Mr. Reader, Fraternal Delegate from the Texas Pharmaceutical Association, asked me to extend to the State Medical Association greetings from his organization. He, like most legislators, was late. He understood that he was to be here yesterday, instead of Monday. He asked me to say that he is still for the doctors one hundred per cent. This year he has no opposition, so it looks like he will go back. I will say this in behalf of the doctor in politics, Mr. Reader has been our representative from Bexar County for the past ten years, and the doctors have re-elected him. I have had several ask me, "Do Holman and Reese still want Reader," and I found that they do.

President Reeves: Dr. Scull, I think you may go back and say to Mr. Reader that this House of Delegates and the doctors of Texas who know of his splendid work all these years at Austin in our behalf, are cordially and fully appreciative. We regret very much that conditions were such that he could not appear personally at this time.

Have we any other fraternal delegates? Any special committees of the House?

President Reeves: The next, I believe, is communications.

COMMUNICATION ON DISCOVERY OF ANESTHESIA

Secretary Taylor. Mr. President, I have a telegram from the Secretary-Manager of the Southern Medical Association. I deem it a very important telegram. The matter to which reference is had in the telegram is one of some consequence to us in the South. It reads as follows:

"Our information is that Paramount Pictures has in the making a film entitled 'Triumph Over Pain,' in which credit for the discovery of anesthesia is given to Morton, the Boston dentist.

"Mississippi State Medical Association in annual session now at Jackson has just passed the following resolution:

"'*Whereas*, it has come to our attention that Paramount Pictures, Incorporated, is in process of making a film based upon the life of Dr. W. T. G. Morton, a Boston dentist, as the discoverer of ether anesthesia, and

"'*Whereas*, unmistakable proofs show that Crawford W. Long used sulphuric ether to produce surgical anesthesia in Jefferson, Georgia, on March 30, 1842, and

"'*Whereas*, undoubted records show that this was the first time in history that ether was ever used for this purpose, and

"'*Whereas*, we are convinced that Dr. Long did everything in his power with the facilities at hand to publish his discovery to the world, and

"'*Whereas*, the Congress of the United States has recognized Crawford W. Long as the first to use sulphuric ether, and

"'*Whereas*, the United States Post Office Department has recognized Crawford W. Long as the first to use sulphuric ether for the purpose of surgical anesthesia by publishing a postage stamp in his honor, and

"'*Whereas*, the Southern Medical Association nineteen years ago appointed a committee representing each of the seventeen states composing this association, to study available records and report as to their findings, and which committee after a period of study for one year, unanimously reported Crawford W. Long as the discoverer of anesthesia.

"'*Resolved:* That the Mississippi State Medical Association assembled at its Seventy-third Annual Session at Jackson, Mississippi, May 14, 1940, declares Crawford W. Long and none other was the discoverer of anesthesia and is entitled to the credit and honor for an achievement of such inestimable benefit to medicine and to humanity, and, Be It Further

"'*Resolved:* That the Mississippi State Medical Association request that Paramount Pictures, Incorporated, desist from its published proposal of making this film honoring Dr. W. T. G. Morton, a Boston dentist, as the discoverer of anesthesia for the reason that such a production would be contrary to the facts by its exhibition and would give honor to whom it is not due.'

"It would be helpful if Texas made a similar protest. Your own Dr. M. L. Graves was a member of the Southern Medical Association committee referred to in the resolution. If any action is taken it should be sent immediately to Frank Freeman, Paramount Pictures, West Coast Studios, 5451 Marathon Street, Hollywood, California. Regards and good wishes.

C. P. LORANZ, Secretary and General Manager.

I move that this telegram be referred to our Reference Committee on Memorials and Resolutions.

The motion was seconded by Dr. C. C. Foster and carried.

Secretary Taylor: I have the following telegram:

"Greetings and best wishes for a most inspiring State Convention. We sincerely hope your delegates to the A. M. A. meeting in June will favor the selection of St. Louis for the American Medical Association Convention in 1943.—CYRUS E. BURFORD, M. D., President, Missouri State Medical Association."

I move that the telegram be referred to the Texas delegation to the A. M. A.

President Reeves: It will be so referred.

Secretary Taylor: I have the following telegram:

"The St. Louis Medical Society extends best wishes for a most successful meeting of the State Medical Association of Texas. We are inviting the American Medical Association to hold their 1943 convention in St. Louis. Practically every one who attended the last convention in St. Louis voted it one of the Association's most outstanding meetings. We sincerely hope your delegates will consider our invitation favorably at the New York meeting in June.—HERBERT S. LANGSDORF, M. D., President, St. Louis Medical Society."

I move that this telegram be referred to the Texas delegation to the American Medical Association.

President Reeves: It will be so referred.

Secretary Taylor: I have a telegram from Claude

L. Littlepage. "We greet you, we welcome you and we salute the guardians of our health." I move that it be received and filed.

President Reeves: It is so ordered.

Secretary Taylor: I have a resolution from our Section on Eye, Ear, Nose and Throat. It pertains to legislation on hearing aids. I move that the resolution be referred to the Legislative Committee of the State Medical Association of Texas, with instructions to determine from the general attorney of the State Medical Association whether in fact the Medical Practice Act as it stands now includes prescribing aids to the hearing and if it does not, that the committee undertake to do something about it.

The motion was seconded by Dr. Miller and carried.

Dr. H. F. Connally presented a resolution bearing on the problem of contraception, which resolution was referred to the Reference Committee on Scientific Work.

Amendment to By-Laws Establishing Council on Postgraduate Education

Secretary Taylor: There are pending now two amendments to the by-laws of the State Medical Association. On page 50 of the Handbook for the House of Delegates will be found a proposed amendment to Section 7 of Chapter IX of the by-laws, which amendment sets up the Council on Post Graduate Medical Education. I will read the proposal. (Reads.) The House of Delegates will recognize this as the amendment to the by-laws proposed by President Reeves, approved by the Executive Council, and as prepared by the Committee on Amendments to the Constitution and By-Laws. As I understand it, all this House of Delegates needs to do now is to vote.

Dr. John T. Moore: I now move that the amendment just read be adopted by the House of Delegates.

The motion was seconded by Dr. E. W. Bertner, of Houston, and carried.

President Reeves: Any other unfinished business?

Secretary Taylor: There is pending an amendment to Chapter X of the by-laws, in two or three sections, pertaining to the establishment of a Scientific Section on Pediatrics. The amendments have been duly introduced and passed upon by a reference committee, and their passage recommended. I will read the amendments:

Amendment to By-Laws Establishing a Section on Pediatrics

"Amend Section 1, Chapter X of the by-laws by changing the third and fourth lines of the section in the 1937 published edition, on page 24, by eliminating the words 'and Diseases of Children' (amended in 1939 to read 'Pediatrics').

"Amend Section 1, Chapter X of the by-laws, page 24, 1937 edition, by adding to the list of sections set up therein the following: '(8) Section on Pediatrics.'

"Amend Section 3, Chapter X of the by-laws, page 24, 1937 edition, by changing the last line of the section to read as follows: 'Pathology, 18; Pediatrics, 18'."

So that if these amendments should be adopted the newly created Section on Pediatrics would be allowed a limit of eighteen papers.

It is moved that Chapter X of the by-laws be amended by adding a new Section 2, between Section 1 and the present Section 2, page 24, 1937 edition of the constitution and by-laws, as follows: "Section 2. Finances permitting, the Board of Trustees shall appropriate sufficient funds from the treasury of the Association to cover the railroad fare, pullman fare and hotel expenses of one invited guest for each of the several scientific sections, and one additional guest each for the Section on Medicine and the Section on Surgery, said guest to be selected in accordance with Section 4, Article II, of the constitution.

Amend Chapter X of the by-laws, page 24, 1937 edition, by changing the numerical designation of Sections, 2, 3, 4, 5, 6, and 7 to Sections 3, 4, 5, 6, 7, and 8, respectively.

These amendments were submitted by Dr. Talbot A. Tumbleson.

Dr. Tumbleson: I move the adoption of the amendments to the by-laws as read.

The motion was seconded by Dr. E. W. Bertner and Dr. J. Harolde Turner and carried.

Dr. J. Harolde Turner: I wish to offer the following amendment to the Constitution and By-Laws of the State Medical Association of Texas, edition 1937, Chapter IX, page 24, Section 17, line 4, strike out the numeral "10" and replace with the numeral "20." The purpose of this is to allow more time for your reference committees. I understand that such a change would also be very beneficial to the official family of the Association, that they may get out the handbooks in time and not be in such a rush at the last minute.

President Reeves: Referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Dr. Clifford G. Swift then presented the third report of the Reference Committee on Scientific Work, as follows:

THIRD REPORT OF REFERENCE COMMITTEE ON SCIENTIFIC WORK

This committee has reviewed the supplementary report of the Committee on Tuberculosis, and recommends its adoption.

Upon motion of Dr. Swift, seconded by Dr. H. F. Connally, the supplementary report of the Committee on Tuberculosis was adopted.

This committee has reviewed the following resolution offered by Dr. H. F. Connally before the House of Delegates:

Resolution on Contraception

Whereas, there has been, and is now, much interest in maternal health and child welfare and much confusion in the minds of the public as regards the medical field of the prevention of conception, and

Whereas, the prevention of conception in appropriate cases has always been a proper problem for the practice of medicine; therefore be it

Resolved, that the teaching and study of scientifically correct methods of prevention of conception, and the actual practice of prevention, is a suitable subject for teaching and study in medical colleges and in recognized, professionally controlled, women's clinics.

We recommend the adoption of this resolution.

Upon motion of Dr. Swift, seconded by Dr. E. W. Bertner, the resolution was adopted.

Upon motion of Dr. Swift, seconded by Dr. Felix P. Miller, the third report of the Reference Committee on Scientific Work was adopted as a whole.

Dr. M. W. Sherwood then presented the first report of the Reference Committee on Resolutions and Memorials, as follows:

FIRST REPORT OF REFERENCE COMMITTEE ON RESOLUTIONS AND MEMORIALS

Dr. Sherwood: Your Committee on Resolutions and Memorials has considered the attached correspondence from the National Association of Retail Druggists, Chicago, Illinois, in which it is requested

that the State Medical Association of Texas lend such support as may be possible in influencing manufacturers to exercise reasonable control over the distribution of vitamins. Our committee recommends that this correspondence be referred back to the secretary, for such action as he deems necessary. I move the adoption of that recommendation.

The motion was seconded by Dr. B. L. Jenkins, and carried.

Your committee has reviewed the attached correspondence from the Oregon State Medical Society, under date of April 5, 1940, in which excerpts from proceedings concerning Mayo Clinic and Foundation publicity are enclosed, and which further reads, "The committee recommends that this publicity of the Mayo Clinic and Foundation be called to the attention of the American Medical Association and all constituent state medical associations."

Our committee recommends that we acknowledge receipt of the communication of the letter, and state that it has been called to the attention of our House of Delegates.

I move the adoption of this part of the report.

The motion was seconded by Dr. F. P. Miller, and carried.

(Vice-President H. E. Griffin assumed the Chair.)

Dr. Sherwood: I move the adoption of the report as a whole.

The motion was seconded by the Secretary, was put and carried.

Dr. M. L. Wilbanks then presented the Report of the Board of Councilors as a Reference Committee.

REPORT OF BOARD OF COUNCILORS AS A REFERENCE COMMITTEE

The Board of Councilors as a reference committee has had referred to it the following proposed change in the by-laws:

AMENDMENT TO BY-LAWS CHANGING TRINITY COUNTY TO NINTH DISTRICT

"Amend Section 2, Chapter XIII of the by-laws by adding to District No. 9, as set up in that section, page 33, 1937 edition, the word 'Trinity' between the words 'San Jacinto' and 'Waller'.

"Amend Section 2, Chapter XIII of the by-laws by removing from District No. 11, as set up in that section, page 33, 1937 edition, the words 'and Trinity' and by removing the comma between 'Leon' and 'Smith' and inserting in lieu thereof the word 'and'."

I move the adoption of this report and amendment.

The motion was seconded by Dr. F. P. Miller and carried.

Dr. Wilbanks: You will see by this report that our Honorary Membership is growing immensely. We have fifteen now to report, which is rather unusual.

NEW HONORARY MEMBERS

List of those recommended to honorary membership by the Board of Councilors.

1. Dr. Jessie L. Herrick, Denton County (Denton).
2. Dr. J. F. Haley, Midland County (Midland).
3. Dr. J. T. O'Barr, Ector County (Big Spring).
4. Dr. J. L. Bow, Grayson County (Whitewright).
5. Dr. James S. McKown, Hill County (Osceola).
6. Dr. A. B. McPherson, Hill County (Lovelace).
7. Dr. J. E. Fuller, Lamar County (Paris).
8. Dr. James G. Douglas, Runnels County (Ballinger).
9. Dr. W. E. Cravens, Lubbock County (Lubbock).
10. Dr. Wm. A. Starkey, Cass-Marion County (Atlanta).
11. Dr. I. A. Withers, Tarrant County (Fort Worth).
12. Dr. Ralph S. Jackson, Bexar County (San Antonio).
13. Dr. W. M. Brumby, Harris County (Houston).
14. Dr. Seth A. McConnell, Harris County (Houston).
15. Dr. W. E. Carruth, Nueces County (Corpus Christi).

I move the adoption of this part of the report.

The motion was seconded by Dr. Sweatland and carried.

Upon motion of Dr. Wilbanks, seconded by Dr. Yeager and by Dr. Connally, the report of the Board of Councilors as a Reference Committee was adopted as a whole.

Upon motion of Dr. F. P. Miller, seconded by Dr. H. F. Connally, adjournment was taken, to meet promptly at 8:00 o'clock a. m., May 16, 1940.

Thursday, May 16, 1940

MINUTES OF THE HOUSE OF DELEGATES

The House of Delegates met pursuant to adjournment, at 8:00 o'clock a. m., May 16, 1940, in the Empire Room, Hotel Adolphus, Dallas, with President L. H. Reeves presiding.

President Reeves: We will now have the report of the Credentials Committee.

REPORT OF REFERENCE COMMITTEE ON CREDENTIALS

Dr. Tate Miller: Up to just a few moments ago, twenty-four officers were present and sixty-nine members. The credentials of all of them are in order, with one technical exception, Dr. J. H. Caton from the Eastland-Callahan County Society. In this society, Dr. Cockerell was the delegate and Dr. Kuykendall the alternate. Dr. Cockerell signed his credentials over to Dr. Kuykendall, and Dr. Kuykendall signed the certificate on the back that he was delegating his authority to Dr. Caton. This transfer was not signed by the society secretary. Otherwise, the credentials are perfectly in order. I move that Dr. Caton be seated.

The motion was seconded by Dr. Hudgins, and carried.

Secretary Taylor: I have a communication from the Section on Radiology and Physiotherapy, as follows:

Whereas, Dr. J. M. Martin of Dallas has been an untiring worker toward the betterment of the science of medicine in Texas for many years, and

Whereas, he is a man of keen insight into the problems confronting the medical profession, and has been helpful in keeping medical practice upon a high plane, and

Whereas, he enjoys the confidence and esteem not only of the radiologists of Texas, but also the remainder of the medical profession, therefore be it

Resolved, that the Section on Radiology and Physiotherapy of the State Medical Association of Texas go on record as supporting Dr. J. M. Martin for the presidency of the State Medical Association of Texas.

M. H. Glover, Chairman of Section,
James D. Wilson, Secretary.

Dr. W. D. Jones: I have been a close and intimate associate of Dr. Martin for twenty-three years. He has never held office in the State Medical Association, but there is no man who has rendered more service than Dr. Martin has rendered. It is natural that some of his friends should want him to be president, but I have it from Dr. Martin that he

does not wish his name put before the State Medical Association as a nominee for any office.

President Reeves: This communication will be filed in the regular way.

Dr. John T. Moore: Under the head of new business, we present the following communication:

LIBRARY ENDOWMENT FROM PEDIATRIC SOCIETY

At its regular business session held in the Adolphus Hotel in Dallas, May 15, 1940, the Texas Pediatric Society unanimously passed the following motion: "The Texas Pediatric Society shall appropriate the sum of $1000.00 from its treasury, to the State Medical Association of Texas, as a donation to the Library Memorial Endowment Fund, to be designated, 'Texas Pediatric Society Library Endowment Fund,' to be used in the purchase of Pediatric Literature, according to the plan for such endowments as provided by the State Medical Association."

TALBOT A. TUMBLESON, President,
FRANK H. LANCASTER, Secretary-Treasurer.

The official name of the Library Association is the Texas Memorial Medical Library Association. It is a long name, but that is the name the Board of Trustees adopted as probably the best.

I might say in this connection, that the papers setting up this organization have been drawn by our attorney, Judge Freeman; they have been adopted by the Board of Trustees, and cover the organization's plans. Briefly, they provide that the library association shall consist of members of the Board of Trustees of the State Medical Association of Texas, who will have charge of the administration of the library. It has been so planned because one of our handicaps in securing endowments for our library has been that men who had money and wanted to give it were afraid it would not continue to be used as they wanted it used. According to the set-up, the donors, or those making endowments, are assured that their wishes will be carried out, and it also enables them to credit their donations on their income tax reports. We are particularly happy over this thing. The first contributions made, as you know, were by Dr. Sam E. Thompson of Kerrville, and Dr. E. W. Bertner of Houston. This is the third contribution, and I want to say that I consider that this is one of the finest things that the Pediatric Society could have done, and that we do appreciate it. I am sure that the House of Delegates and the entire membership of the State Medical Association appreciate it most highly. We have in sight another thousand dollars. If any of you have any troubles with the authorities about what to do with your money; if you feel that this great library will grow to something that you will be proud of, and that your sons will be proud of, loosen up as far as you feel disposed to, and set up an endowment for it.

President Reeves: This report will be filed. The Secretary is instructed to extend the official thanks of the Association for this splendid donation.

Dr. Guy F. Witt then presented the second report of the Reference Committee on Amendments to the Constitution and By-Laws.

SECOND REPORT OF REFERENCE COMMITTEE ON AMENDMENTS TO CONSTITUTION AND BY-LAWS

AMENDMENT TO BY-LAWS CHANGING DATE OF FILING ANNUAL REPORTS

The Reference Committee on Amendments to the Constitution and By-Laws, has this communication:

I wish to offer the following amendment to the Constitution and By-Laws of the State Medical Association of Texas, 1937 edition, Chapter IX, page 27, Section 17, line 4: "strike out the numeral '10' and replace with the numeral '20'."

This is simply a change requiring committees to file their reports with the Secretary of the State Medical Association twenty days prior to the opening of the Annual Session instead of ten days.

I move the adoption of the report and the amendment.

The motion was seconded by Dr. Sweatland and carried.

Dr. M. W. Sherwood then presented the second report of the Reference Committee on Resolutions and Memorials.

SECOND REPORT OF REFERENCE COMMITTEE ON RESOLUTIONS AND MEMORIALS

With reference to the telegram from the Mississippi State Medical Association and the Southern Medical Association, pertaining to the discovery of ether anesthesia, which was read to the House of Delegates yesterday and which was referred to this committee, we beg to report that we have discussed the matter with Dr. M. L. Graves of Houston, a member of the committee from the Southern Medical Association which made the original decision, that it was Dr. Crawford W. Long and not Dr. W. T. G. Morton, who discovered ether anesthesia. It is the emphatic view of Dr. Graves that the decision of his committee was correct. Under the circumstances, therefore, we submit herewith resolutions which we think will place this Association in the proper light in this matter:

RESOLUTIONS ON DISCOVERY OF ANESTHESIA*

Be it Resolved, that the State Medical Association of Texas, regularly assembled in its Seventy-fourth Annual Session, May 16, 1940, at Dallas, Texas, declares that Dr. Crawford W. Long of Georgia was the discoverer of anesthesia and first to use ether anesthesia for any operative procedure, and is entitled to full credit and honor for the achievement, and be it further

Resolved, that Paramount Pictures Incorporated be requested to desist from its announced intention of making a film honoring Dr. W. G. T. Morton, a Boston dentist, as the discoverer of anesthesia, because such a procedure would be contrary to the facts and would give honor to whom honor is not due.

Upon motion of Dr. Sherwood, seconded by Dr. A. P. Howard, the resolution was adopted and the secretary directed to immediately send the same by wire to Paramount Pictures, the Southern Medical Association, and the Mississippi State Medical Society.

President Reeves: The next order of business is the election of officers. The following tellers will officiate: Drs. B. E. Pickett, R. G. Baker, R. B. Homan, Jr., and T. M. Jarmon.

The Secretary then called the roll and announced that 110 members of the House were entitled to vote.

ELECTION OF OFFICERS

Upon proper nomination, the following officers, councilors, and committee members were elected:

PRESIDENT-ELECT

Dr. N. D. Buie, Marlin.

*SECRETARY'S NOTE: This is a revised edition of the original resolutions submitted by the Reference Committee on Resolutions and Memorials, as per action taken by the House of Delegates, at the request of the committee, later on during the morning session. The parliamentary procedures involved are omitted in the interest of simplicity.

VICE-PRESIDENTS

Dr. G. A. Schenewerk, Dallas.
Dr. Jas. J. Gorman, El Paso.
Dr. S. J. R. Murchison, Fort Worth.

SECRETARY

Dr. Holman Taylor, Fort Worth, to succeed himself.

TREASURER

Dr. K. H. Beall, Fort Worth, to succeed himself.

TRUSTEE

Dr. W. R. Thompson, Fort Worth, to succeed himself.

COUNCILORS

Third District, Dr. E. A. Rowley, Amarillo, to succeed himself.
Fifth District, Dr. C. E. Scull, San Antonio, to succeed himself.
Sixth District, Dr. J. G. Webb, Mercedes, to succeed himself.
Twelfth District, Dr. H. F. Connally, Waco, to succeed himself.
Fifteenth District, Dr. C. A. Smith, Texarkana, to succeed himself.

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

Dr. H. R. Dudgeon, Waco, to succeed himself.
Dr. A. A. Ross, Lockhart, to succeed himself.
Dr. E. H. Cary, Dallas, to succeed himself.

ALTERNATE DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

Dr. E. W. Bertner, Houston, to succeed himself.
Dr. H. Leslie Moore, Dallas, to succeed himself.
Dr. J. J. Crume, Amarillo, to succeed Dr. E. W. Jones, Wellington.

MEMBER COUNCIL ON MEDICAL DEFENSE

Dr. A. P. Howard, Houston, to succeed himself.

MEMBER COUNCIL ON SCIENTIFIC WORK

Dr. A. C. Scott, Sr., Temple, to succeed himself.

MEMBER COUNCIL ON MEDICAL ECONOMICS

Dr. C. C. Cody, Houston, to succeed himself.

MEMBER COMMITTEE ON LEGISLATION

Dr. L. H. Reeves, Fort Worth, to succeed Dr. E. C. Ferguson, Beaumont.

MEMBER COMMITTEE ON COLLECTION AND PRESERVATION OF RECORDS

Dr. E. W. Bertner, Houston, to succeed Dr. S. C. Red, Houston, deceased.

MEMBER COMMITTEE ON HEALTH PROBLEMS IN EDUCATION

Dr. D. J. Jenkins, Daingerfield, to succeed Dr. Joe Gilbert, Austin.

MEMBER COMMITTEE ON CANCER

Dr. Dudley Jackson, San Antonio, to succeed Dr. Paul Brindley, Galveston.

PLACE AND DATE OF NEXT ANNUAL SESSION

Fort Worth. Date to be set by Executive Council.

President Reeves: I will ask Dr. Tate Miller and Dr. H. E. Griffin to escort the President-Elect, Dr. Buie, to the rostrum.

Dr. Tate Miller: It is delightful and thoroughly superb to introduce to you my own and your friend of long years standing, whom you have elected President-Elect of the State Medical Association of Texas, Dr. N. D. Buie, of Marlin. (Applause, the delegates standing.)

ADDRESS OF PRESIDENT-ELECT DR. BUIE

I feel overwhelmed, naturally, and greatly surprised. Until a while ago I didn't know that we had that many smart men in the country. I really think that anybody elected to this high office should feel greatly complimented, and feel the honor deeply. I have been serving with these old boys, many of you who have been deluded into voting for me this morning, and I am going to be in the hands of the greatest secretary there is. I don't think any state is so fortunate as to have for its secretary a man like we have in old Holman Taylor. I will be glad to follow in the footsteps, if I live long enough, of Presidents Hunt and Reeves, and the great number of very distinguished men who have been president of this great association. I assure all of you that I am not going to let you down. (Applause.)

President Reeves: I will ask this same committee to present Dr. Buie to the general session this afternoon.

REPORT OF REFERENCE COMMITTEE ON RESOLUTIONS AND MEMORIALS

Dr. Sherwood: This is the last report of the Reference Committee on Resolutions and Memorials.

RESOLUTION OF THANKS

Whereas, the State Medical Asosciation of Texas, assembled in its Seventy-fourth Annual Session in Dallas, does hereby declare this session to have been one of the best and most profitable in its history, and

Whereas, the Dallas County Medical Society, the Woman's Auxiliary of the Dallas County Medical Society, the Chamber of Commerce, the city officials of Dallas, the county officials, the hotels of Dallas, the newspapers and many others, have coöperated in making this possible, therefore be it

Resolved, that the Texas State Medical Association hereby expresses its deepest appreciation and thanks to all those who have been concerned and interested in making this the Seventy-fourth Regular Annual Session, such an outstanding meeting.

Upon motion of Dr. Sherwood, seconded by Dr. Wilbanks, the Resolution of Thanks was adopted by a rising vote.

President Reeves: At this time, before this meeting adjourns, I wish to express my sincere thanks to this House of Delegates.

You have labored diligently, harmoniously and untiringly in your work of furthering the cause of ethical, organized medicine, and I wish, in addition, to express to my medical friends over the State, my appreciation of their support and assistance during my term of office.

During my entire professional life, I have been deeply interested in ethical, organized medicine. I have enjoyed every day and every hour spent in advancing its interests.

The opportunity to meet and visit with my old friends as I have traveled over the State, and to make new friends, has meant much to me. As time goes on, and as I look back down the dim vista of years, the memory of our work and association together will be among my most pleasant thoughts.

I am most fortunate in being in the town where our Central Office is located. Dr. Holman Taylor and his efficient staff have been of much assistance to me in many ways. I want to express my personal appreciation of each of them. I consider Dr. Taylor the most efficient state secretary of any medical association. (Applause.) Certainly we have the best medical journal of any published in the United States.

Dr. Anderson is one of the most efficient and hardest workers in our organization. He is largely responsible for our splendid library. I do not be-

lieve we have any other two members in our profession who could handle this Central Office so efficiently as it is being handled by Dr. Taylor and Dr. Anderson.

Again I wish to express my appreciation to the members of this House of Delegates for their united efforts in rendering a signal service to our administration. (Applause.)

Mr. Secretary, is there any further business at this time?

Secretary Taylor: None on the secretary's table, Mr. President.

There being no further business before the House, upon motion of Dr. F. P. Miller, seconded by Dr. A. E. Sweatland, the House of Delegates adjourned *sine die.*

THIRD GENERAL MEETING

The Third General Meeting of the Association was called to order at 9:30 a. m., Thursday, May 16, in the Grand Ball Room, Hotel Adolphus. In the absence of the President and all Vice-Presidents, Dr. R. B. Anderson presided.

Dr. Anderson introduced Dr. Holland M. Tigert, Nashville, Tennessee, Associate Professor of Clinical Gynecology, School of Medicine, Vanderbilt University, who presented a paper on "Post Menopausal Bleeding." This paper will be published in an early number of the TEXAS STATE JOURNAL OF MEDICINE.

Dr. Anderson introduced Dr. A. C. Christie, Washington, D. C., Professor of Clinical Radiology, Georgetown University Medical School, who presented a paper on "Diagnosis and Management of Cancer of the Breast." This paper will be published in an early number of the JOURNAL.

Dr. John T. Moore, Chairman of the Board of Trustees, announced the establishment of three endowment funds for the Library of the State Medical Association, as follows:

(1) Warner E. Williams Memorial Fund, $1,000.00, donated by Dr. and Mrs. E. W. Bertner, Houston.

(2) Sam E. Thompson Memorial Fund, $1,000.00, donated by Dr. and Mrs. Sam E. Thompson, Kerrville.

(3) Texas Pediatric Society Memorial Fund, $1,000.00, donated by the Texas Pediatric Society.

Dr. Moore urged that members of the Association who have surplus funds with which they wish to serve a humanitarian cause now or after they are gone, to consider establishing memorial funds for the Library of the State Medical Association. Dr. Moore called attention to the fact that "you cannot take it with you." He assured prospective donors that their respective donations would be used exactly as requested, and that such donations are deductible from income tax returns. The newly organized Texas Memorial Medical Library Association has been set up for the purpose of insuring donors against miscarriage of their intentions, and it is an absolute assurance.

Dr. Anderson introduced Dr. Frank H. Lahey, Boston, Massachusetts, Director of Surgery, The Lahey Clinic; Surgeon-in-chief of the New England Deaconess Hospital; Surgeon-in-chief to the New England Baptist Hospital, who delivered an address on "Advances in the Management of the Thyroid Disease," which will be published in an early number of the JOURNAL.

COMBINED SECTIONS MEETING

A combined sections meeting was called to order in the Palm Garden of the Adolphus Hotel, 2:30 p. m., May 16, with President Dr. Reeves presiding.

Dr. A. C. Christie, Washington, D. C., discussed the subject, "Diagnosis and Treatment of Bronchiectasis."

Dr. Joseph C. Beck, Chicago, discussed the subject, "Hearing Aids for the Deafened—(a) Physical, (b) Medical, (c) Surgical."

Dr. Claude S. Beck, Cleveland, Ohio, discussed the subject, "Resuscitation of the Heart and Experiences in Defibrillation of the Human Ventricles."

Dr. Alan Brown, Toronto, Canada, discussed the subject, "Nutrition in Infancy and Childhood."

Dr. Roy R. Kracke, Atlanta, Georgia, discussed the subject, "Infectious Mononucleosis."

Dr. F. J. Heck, Rochester, Minnesota, discussed the subject, "The Diagnosis and Treatment of the Leukemias."

Dr. H. M. Tigert, Nashville, Tennessee, discussed the subject, "Endometriosis."

Dr. Frank Lahey, Boston, Massachusetts, discussed the subject, "Management of Surgical Lesions of the Gallbladder and Bile Ducts."

President Dr. Reeves then presented the gavel to President-Elect Dr. Preston Hunt of Texarkana, with the following remarks:

"The time has arrived when I must turn this gavel over to the one who is to carry on as our leader.

"Dr. Hunt, it is with mingled feeling of pleasure and regret that I turn this gavel over to you, sir. With regret I do so, because I realize that the prerogatives of president are no longer mine. I do so with pleasure because I am sure that you are going to carry on with energy and determination to the very best of of your ability in the cause of ethical, organized medicine. Again, here and now, I pledge to you the same loyal support during your administration that you have given me during mine. I wish for you success in all your undertakings. The gavel is now yours."

President-Elect Dr. Hunt, in assuming the office of the President, said:

ADDRESS OF PRESIDENT DR. HUNT

In taking over the responsibilities of the office of President of this great organization, which I do with a bit of trepidation, I must make acknowledgment of the very fine predicate laid for me by my distinguished predecessor, Dr. Reeves. I must also extend thanks to him for the opportunity he has given me to serve a rather effective apprenticeship. I hope I may take over without a great deal of lost motion.

Naturally, I have accumulated a number of ideas pertaining to the work of the Association, which ideas I may presume to call objectives. Perhaps I should mention some of them, which, under the circumstances, I must do in abbreviated terms. Under the administration of Dr. Reeves, the State Medical Association of Texas has, for the first time, succeeded in bring each county in the State, into a county organization. In other words, the State Medical Association may now be said to be completely organized. My first and perhaps basic objective, will be to consolidate and maintain these gains. I appreciate fully that except by and through the efforts and support of my official family, particularly the Councilors and County Society Secretaries, I cannot succeed in this very fine purpose. I appreciate further, that neither the County Society Secretaries nor the Councilors can succeed in holding the ground we have lately gained except they have the active support of the rank and file of the medical profession of Texas. This support I earnestly solicit. Having consolidated our gains and gotten under way, we are due to deal with a number of highly important problems, the which we must first solve, and then by judicious decision and prompt action, deal with them

to the greater good of our dependent public and the practice of medicine. We can neither solve nor deal successfully with these problems except our organization is complete, and our members understand that no agency outside of our profession can successfully develop and control the practice of medicine. Our people must be taught to understand further, that except the practice of medicine is rigidly controlled, they will be illy and perhaps disastrously served. Few, even of our own profession, realize the dangers of quackery and of ignorance in the sick room.

No legislature can do more than to set up the frame work for protection, and no legislature can even do that except upon the counsel and advice of practicing physicians. How could they? Which is just another way of saying that the medical profession of this country is due to assume the responsibilities of the old-time medical guild. It must do that under strictly democratic procedures, and this is going to be an exceptionally difficult task. It would be a simple matter to so control the practice of medicine as to insure competent, honest and dependable medical service for the public were autocratic power granted, but we do not want autocratic power for the medical profession, nor do we want it for anybody else in this country. If, during my incumbency as President of this Association, the medical profession of Texas will get this very simple idea fixed in its collective mind, a very important objective will have been attained.

Another objective of mine will be to aid in establishing a satisfactory distribution of medical service, which effort is now under way through certain agencies of the Association. It would be a worthy objective to defeat all efforts to socialize the practice of medicine, or reduce the high scientific standards of the practice of medicine, and those objectives are being worked on by still other agencies of the Association. In short, the policies of this Association, as I have seen them develop, and as I have helped to develop them in the course of my service to the Association, are all my objectives.

Again I solicit the sympathy and the support of the officers and members of this Association, and to the extent that I receive this support will I succeed. My only guarantee is that I will do the best I can. At this point, I wish to personally and publicly thank the officers and members of our very efficient Auxiliary for their loyalty and untiring efforts toward the uplift of the present high standards of our ideals.

President Hunt then declared the Seventy-fourth Annual Session of the State Medical Association adjourned *sine die*.

MISCELLANEOUS

COMING MEETINGS AND CLINICS

State Medical Association of Texas, Fort Worth, May 12-15, 1941. Dr. Preston Hunt, Texarkana, President; Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth, Secretary.

American Medical Association, New York City, June 10-14, 1940. Dr. Rock Sleyster, Wauwatosa, Wisconsin, President; Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Southern Medical Association, Louisville, Kentucky, November, 1940. Dr. Arthur T. McCormack, Louisville, Kentucky, President; C. P. Loranz, Empire Building, Birmingham, Alabama, Secretary-Manager.

Texas Allergy Association, Fort Worth, May 12, 1941. Dr. Boen Swinny, Medical Arts Building, San Antonio, President; Dr. Homer Prince, Medical Arts Building, Houston, Secretary.

Texas Ophthalmological and Otolaryngological Society, Fort Worth, December, 1940. Dr. J. W. Ward, Greenville, President; Dr. Dan Brannin, Medical Arts Building, Dallas, Secretary.

Texas Radiological Society, Sherman, January 18, 1941. Dr. Jerome H. Smith, San Angelo, President; Dr. L. W. Baird, Temple, Secretary.

Texas Club of Internists, Boston, October, 1940. Dr. Carl Lovelace, Waco, President; Dr. George Herrmann, Medical College, Galveston, Secretary.

Texas Association of Obstetricians and Gynecologists, Marlin, 1940. Dr. H. Reid Robinson, Galveston, President; Dr. Julius McIver, 1314 Medical Arts Building, Dallas, Secretary.

Texas Pediatric Society. Dr. T. A. Tumbleson, Beaumont, President; Dr. Frank Lancaster, 4409 Fannin Street, Houston, Secretary.

Texas Neurological Society. Dr. Wilmer Allison, Fort Worth, President; Dr. Melbourne J. Cooper, Nix Professional Building, San Antonio, Secretary.

Texas Railway and Traumatic Surgical Association. Dr. G. V. Brindley, Temple, President; Dr. Ross Trigg, First National Bank Building, Fort Worth, Secretary.

Texas State Pathological Society. Dr. Geo. T. Caldwell, Dallas, President; Dr. M. D. Bell, 1109 Medical Arts Building, Dallas, Secretary.

Texas State Heart Association. Dr. Joseph Kopecky, San Antonio, President; Dr. V. E. Schulze, San Angelo, Secretary.

Texas Dermatological Society. Dr. W. A. Smith, Beaumont, President; Dr. Duncan O. Poth, 1230 Nix Professional Building, San Antonio, Secretary.

Texas Surgical Society, Houston, Oct. 7-8. Dr. Everett Jones, Wichita Falls, President; Dr. Walter Stuck, 1426 Nix Professional Building, San Antonio, Secretary.

Texas Orthopedic Society, Fort Worth, May 12, 1941. Dr. W. B. Carrell, Dallas, President; Dr. Ruth Jackson, Medical Arts Building, Dallas, Secretary.

Texas Association of Medical Anesthetists. Dr. Thomas H. Compere, Houston, President; Dr. R. A. Miller, 1415 Nix Professional Building, San Antonio, Secretary.

Texas Society of Gastro-enterologists and Proctologists, Fort Worth, May 12, 1941. Dr. M. O. Rouse, Dallas, President; Dr. Tom E. Smith, 1207 Medical Arts Building, Dallas, Secretary.

Texas Mental Hygiene Association. Dr. Paul White, Austin, President; Dr. Evelyn M. Carrington, Huntsville, Secretary.

Texas Tuberculosis Association. Dr. E. G. Faber, Tyler, President; J. W. Butler, Galveston, Secretary.

Texas Public Health Association, Fort Worth, Oct. 7-9, 1940. Dr. J. W. E. H. Beck, Austin, President; Mr. P. A. Kerby, State Department of Health, Austin, Secretary.

Second District Medical Society. Dr. W. V. Ramsey, Abilene, President; Dr. W. T. Sadler, Merkel, Secretary.

Third, Panhandle, District Medical Society, Lubbock, Oct. 8-9, 1940. Dr. F. A. White, Childress, President; Dr. H. H. Latson, 301 Polk St., Amarillo, Secretary.

Fourth District Medical Society, Ballinger, Oct., 1940. Dr. J. P. .Anderson, Brady, President; Dr. O. H. Chandler, Ballinger, Secretary.

Fifth and Sixth, Southwest District Society, McAllen, June 29-30. Dr. Cary Poindexter, Crystal City, President; Dr. W. W. Bondurant, Jr., 1512 Nix Professional Building, San Antonio, Secretary.

Seventh, Austin District. Dr. Joe A. Shepperd, Burnet, President; Dr. A. L. Nanny, Marble Falls, Secretary.

Eighth, Ninth and Tenth District Medical Society, Houston, 1940. Dr. Walter D. Brown, Beaumont, President; Dr. A. A. Ledbetter, Medical Arts Building, Houston, Secretary.

Eleventh District Society, Palestine, Oct., 1940. Dr. Clayton Shirley, Tyler, President; Dr. C. C. McDonald, Tyler, Secretary.

Twelfth, Central Texas District Society, Marlin, July 9, 1940. Dr. Dan Warren, Waco, President; Dr. R. K. Harlan, Temple, Secretary.

Thirteenth, Northwestern District Society, Wichita Falls, September. Dr. Tom Bond, Fort Worth, President; Dr. J. Edward Johnson, Mineral Wells, Secretary.

Fourteenth District Society, Bonham, June, 1940. Dr. Ira L. Thomas, Gainesville, President; Dr. R. S. Usry, 1835 Garrett, Dallas, Secretary.

Fifteenth, Northeast District Society, Texarkana, Oct. 8, 1940. Dr. Hugh M. Ragland, Gilmer, President; Dr. J. N. White, Texarkana, Secretary.

TEXAS STATE HEART ASSOCIATION

The Texas State Heart Association met May 13, in Parlor A, Hotel Adolphus, Dallas, with ninety-eight members and visitors present. In addition to the program as published in the April number of the JOURNAL, the March of Time film, "The Human Heart" was shown through the courtesy of the University of California Extension Department under the supervision of Dr. David W. Carter, Jr., Dallas, and Mr. Waters of the Art Department, Baylor University School of Medicine.

Booklets on "Standardization of Blood Pressure Readings," published by the American Heart Association were distributed to those present.

Discussers of papers presented before the Association included: Drs. W. B. Whiting, Wichita Falls;

Edward Schwab, Galveston; Lee Rice and Merton Minter, San Antonio; S. J. Lewis, Beaumont; M. D. Levy and Sidney Schnur, Houston; and David W. Carter, Jr., Merrit B. Whitten, J. Shirley Sweeney, Robert Barton, and Henry M. Winans, Dallas.

Announcement was made of the affiliation of the Texas State Heart Association with the American Heart Association.

Officers for the ensuing year were elected as follows: President, Dr. K. H. Beall, Fort Worth; vice-president, Dr. Ghent Graves, Houston; and secretary-treasurer, Dr. Victor E. Schulze, San Angelo.

Members of the Association were guests of Dr. and Mrs. Henry M. Winans at a barbecue on the evening of May 13 at the Dallas Country Club.

TEXAS ALLERGY ASSOCIATION

The Texas Allergy Association met May 13, in Parlor D, Adolphus Hotel, Dallas, with an attendance of twenty-eight members and thirty-one visiting physicians.

The scientific program as published in the April number of the JOURNAL was carried out.

The following officers were elected for the ensuing year: President, Dr. Boen Swinny, San Antonio, and secretary, Dr. Homer Prince, Houston.

The Society will hold its next meeting on the Monday immediately preceding the next annual session of the State Medical Association in Fort Worth.

TEXAS DERMATOLOGICAL SOCIETY

The Texas Dermatological Society met May 13, at Dallas, with an attendance of all but two of its members. During the morning a clinical session was held at the Baylor Clinic, at which time thirty-three clinical cases were studied. Immediately following the examination of patients a case discussion was had. A luncheon was held at the Dallas Athletic Club.

During the business session, the following new members were elected: Drs. Shirley Bowen, Galveston; Lee Edens, Austin; R. P. Hughes, El Paso; and C. D. Steward, Corpus Christi.

Officers for the ensuing year were elected as follows: President, Dr. W. A. Smith, Beaumont; vice-president, Dr. J. Lewis Pipkin, San Antonio; and secretary, Dr. D. O. Poth, San Antonio.

The date for the fall meeting was not definitely determined.

SOUTHWEST TEXAS DISTRICT SOCIETY

The Southwest Texas District Medical Society, embracing the Fifth and Sixth Districts of the Association, will meet June 28 and 29 in McAllen. The following is the scientific program as prepared to date, furnished by the secretary, Dr. W. W. Bondurant, Jr., of San Antonio:

Fractures of the Hip—W. G. Stuck, M. D., San Antonio.

The Diagnosis and Treatment of Anal Fissures and Anal Ulcers—Carl Giesecke, M. D., San Antonio.

Collapse Therapy in the Treatment of Pulmonary Tuberculosis—Edward Coyle, M. D., San Antonio.

Some Problems in Virus Diseases in Texas—S. W. Bohls, M. D., Austin.

The Miller-Abbott Tube—Rufus Knapp, M. D., Kerrville.

Practical and Experimental Radium Radiation—Asa Beach, M. D., San Antonio.

Drainage in Abdominal Surgery Based on Physiologic Principles—G. Van Amber Brown, M. D., McAllen.

Spinal Anesthesia—H. D. White, M. D., Monterrey, N. L., Mexico.

Renal Hypoplasia—Phil A. Bleakney, M. D., Harlingen.

Symptoms and Physical Findings in Typhus Fever—U. S. Marshall, M. D., Weslaco.

The Blood Pictures as an Aid in Early Diagnosis in Typhus—H. E. Whigham, M. D., McAllen.

In addition to the scientific program, an address on narcotic laws will be delivered by a member of the United States Department of the Treasury.

Entertainment features planned for the meeting include a sight-seeing tour of a part of the Valley and a dinner and dance across the border in Reynosa, Mexico. Plans are also being made for informal visits to Monterrey Saturday afternoon and Sunday following the meeting.

TEXAS ORTHOPEDIC ASSOCIATION

The Texas Orthopedic Association had a combined luncheon and business session at the Baker Hotel, Dallas, May 13, with twelve members present.

Dr. R. C. Hood, director of the Crippled Children's Division of the Children's Bureau, met with the Association after a four-hour business session. The purpose of Dr. Hood's visit was to bring about a closer relationship between the State crippled children's work and Federal crippled children's work, and to advise on policies and standards of the program in Texas.

Officers elected to serve during the ensuing year were: President, Dr. W. B. Carrell, Dallas; vice-president, Dr. E. M. Cowart, Houston; and secretary-treasurer, Dr. Ruth Jackson, Dallas.

The Association will hold its next meeting in conjunction with the annual session of the State Medical Association in Fort Worth.

TEXAS SOCIETY OF GASTRO-ENTEROLOGISTS AND PROCTOLOGISTS

The Texas Society of Gastro-enterologists and Proctologists held its third annual meeting May 13, at the Baker Hotel, Dallas, with forty-five physicians in attendance. The scientific program as published in the April number of the JOURNAL was carried out. The symposium on carcinoma of the colon was discussed by Drs. T. E. Smith and George Underwood, Dallas; Dudley Jackson, San Antonio, and C. H. Bishop, Wichita Falls.

The annual banquet was held in the Baker Hotel, followed by a business meeting, at which officers were elected for the ensuing year as follows: President, Dr. M. O. Rouse, Dallas; first vice-president, Dr. Hugh Welch, Houston; second vice-president, Dr. G. E. Brereton, Dallas; and secretary, Dr. Tom E. Smith, Dallas.

The Society will hold its next meeting on the Monday preceding the annual meeting of the State Medical Association in Fort Worth.

TEXAS ASSOCIATION OF MEDICAL ANESTHETISTS

The Texas Association of Medical Anesthetists met May 13, at the Hotel Adolphus, Dallas. The scientific program as published in the April number of the JOURNAL was carried out.

The paper of Dr. Roy Reed, Houston, was discussed by Drs. George Paschal and R. A. Miller, San Antonio, and E. A. Rovenstine, New York City.

The paper of Dr. E. A. Rovenstine, New York City, was discussed by Drs. Carl W. Hoeflich and R. F. Bonham, Houston, and Frank O. Barrett, El Paso.

The paper of Dr. James Bennett, Galveston, was discussed by Drs. J. C. Youngblood, Houston; George Paschal, San Antonio; Claudia Potter, Temple; and Fred E. Woodson, Tulsa, Oklahoma.

The paper of Dr. George Mechling, Oklahoma City, was discussed by Drs. Carl W. Hoeflich and Thomas H. Compere, Houston, and Dr. Duppee.

The paper of Dr. Fred E. Woodson, Tulsa, Oklahoma, was discussed by Drs. E. A. Rovenstine, New York City, and James Bennett, Galveston.

At a business session the following officers were elected for the ensuing year: President, Dr. Thomas H. Compere, Houston; vice-president, Dr. Frank O.

Barrett, El Paso; and secretary-treasurer, Dr. R. A. Miller, San Antonio.

An entertainment feature in connection with the meeting was a dinner dance in the Baker Hotel Mural Room, the evening of May 13, for members of the Association and their guests.

TEXAS NEUROLOGICAL SOCIETY

The Texas Neurological Society held its twelfth annual meeting May 13, at Parkland Hospital, Dallas, with Dr. Melbourne J. Cooper, vice-president, presiding. Forty-five members were present.

The morning session was devoted to clinics presented by Dallas members of the Society, under the direction of Dr. Arthur J. Schwenkenberg.

Dr. C. C. Nash, Dallas, presented a man who had had removed a reticulo cell sarcoma outside the dura at the fifth dorsal segment. Prior to operation the patient had been paralyzed from the waist down. He was now able to walk. The case was discussed by Drs. A. J. Schwenkenberg, P. M. Levin, James Greenwood, Jr., Lewis M. Helfer, and C. C. Nash.

Dr. S. R. Snodgrass, Galveston, reported the case of a boy, age 8, who developed apathy, difficulty in walking, lack of attention and difficult vision. When first seen six months after the beginning of symptoms he had bilateral optic atrophy and all the extremities were spastic. He developed status epilectius and died. Necropsy supported a previous diagnosis of multiple diffuse sclerosis, or Schilder's disease.

Dr. Tom Cheavens, Dallas, presented a man, age 55, who five years previously had developed a clumsy gait and had since lost thirty pounds. Physical examination at the present, showed a positive Babinski on the right and no loss of sensation. The case was presented for diagnosis. The case was discussed by Drs. E. M. Perry, C. C. Nash and James Greenwood, Jr. Since there was no laboratory evidence of neurosyphilis the possibility of a brain tumor was suggested.

Dr. Robert E. Winn, Dallas, presented a woman, age 26, whose present trouble began four years ago by flooding. The Wassermann reaction was positive but no antisyphilitic treatment was given until two years later. She then received ten months of antisyphilitic treatment, the Wassermann reaction becoming negative in four months. In 1939 her condition had grown worse and a Wassermann test of the spinal fluid was four plus with a negative Lange test and a negative blood reaction. She developed delusions, became stuporous and incontinent with contracture of the lower limbs. The patient was given heavy vitamin treatment and had shown much improvement but is still in a confused state of mind. The case was discussed by Drs. A. J. Schwenkenberg, A. F. Tasch, Titus Harris, M. J. Cooper and Tom Cheavens.

Dr. A. J. Schwenkenberg presented a case of a Mexican boy, age 7.5 years, who had had an attack, following which his left leg and arm were paretic, with numbness of the left arm. Blood studies were negative. Dr. Schwenkenberg expressed the opinion the trouble was extra-pyramidal and stramonium therapy had been instituted with the thought that the case was probably one of encephalitis.

At noon, members of the Society were served luncheon at the hospital, following which the scientific program as published in the April JOURNAL was carried out in Parlor F, at the Hotel Adolphus, with Vice-president M. J. Cooper presiding.

The paper of Dr. Perry C. Talkington on insulin therapy was discussed by Drs. C. H. Standifer, Tom Cheavens, Titus Harris, Giles W. Day, T. M. Dorbandt, and A. J. Schwenkenberg.

The paper of Dr. Wilmer L. Allison on intracranial pressure was discussed by Drs. E. M. Perry, T. B. Bass, Giles W. Day, and C. H. Brown.

The paper by Dr. S. R. Snodgrass on electroencephalogram was discussed by Drs. H. R. Gold, Lewis M. Helfer, P. M. Levin, and S. R. Snodgrass.

The paper by Dr. J. M. Coleman on mental hygiene was discussed by Drs. A. J. Schwenkenberg, Titus Harris, Paul L. White, and T. W. Buford.

The paper by Drs. H. L. Towler, Titus Harris, and Hamilton Ford on encephalography was discussed by Dr. Lewis M. Helfer.

The following physicians were elected to membership in the Society: Drs. Paul L. White, Austin; S. R. Snodgrass, Galveston; L. D. Borough, Fort Worth; A. F. Tasch, Dallas, and R. C. L. Robertson, Houston.

The following officers were elected for the coming year: President, Dr. Wilmer L. Allison, Fort Worth; vice-president, Dr. William Thomas, Terrell; second vice-president, Dr. E. M. Perry, Dallas; and secretary-treasurer, Dr. Melbourne J. Cooper, San Antonio.

The Society voted its approval of the mental hygiene program of the State Health Department.

A vote of thanks was extended to the program committee and to Parkland Hospital for its courtesies.

LIBRARY NOTES

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Requests for packages should be addressed "Library, State Medical Association of Texas, 1404 W. El Paso Street, Fort Worth, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Only one package may be borrowed at a time, and packages are allowed to remain in the hands of the borrower for 14 days.

Package Service

Packages were mailed to the following from the Library of the State Medical Association during May:

Dr. T. C. Cole, Huntsville—*Undulant Fever, therapy* (11 articles).

Dr. A. W. Multhauf, El Paso—*Urinary Tract, infections* (19 articles).

Dr. J. G. Sewell, Belton—*Varicocele* (3 articles).

Dr. W. Ehrhardt, Fairbanks—*Spina Bifida Occulta* (12 articles).

Dr. Philipp Rosenheim, Corpus Christi—(2 books).

Dr. J. E. Smith, Weatherford—*Vaginal Diaphragm* (3 articles).

Dr. M. K. Knight, Amarillo—*Sciatica, therapy* (14 articles).

Dr. P. L. Allen, Weatherford—*Kidneys, diseases* (8 articles).

Dr. E. C. Reed, Legion—*Sclerosis, amyotrophic lateral* (7 articles).

Dr. R. L. Daily, Wichita Falls—*Viruses* (17 articles).

Dr. Heinrich Lamm, La Feria—*Hip Joint, dislocation* (24 articles).

Baylor Medical Library, Dallas—(2 journals).

Dr. Frances Spinka, Texarkana—*Meningitis* (22 articles).

Dr. G. E. Glover, Austwell—*Fever, therapeutic* (2 journals).

Dr. Wm. Reemtsma, New Braunfels—*Stomach, function tests* (10 articles).

Dr. Herbert E. Hipps, Marlin—*Tumors, osteochondroma* (4 articles).

Dr. Ray H. Carter, Marshall—(1 journal).

Dr. R. S. Filmore, Jacksboro—*Snakes, bites* (5 articles).

Dr. Robert P. Jarrett, Canyon—*Calcaneum, fractures* (19 articles); *Navicular Bone* (4 articles).
Dr. D. A. Harrison, Jr., Kingsville—*Diabetes Mellitus, in infants and children* (18 articles).
Dr. Emil Prohl, Tahoka—*Pituitary Body, diseases* (5 articles).
Dr. T. P. Reeder, Newport Beach, Calif.—*Varicose Veins, therapy* (17 articles).
Dr. Edgar Smith, Lockhart—*Undulant Fever* (24 articles).
Dr. W. M. Brook, Lampasas—*Nervous System, tumors* (17 articles).
Dr. Roland B. Anderson, Waco—(1 journal).
Dr. H. B. Deckerd, Dallas—(2 books).
Dr. Phil A. Bleakney, Harlingen—*Kidneys, abnormalities* (9 articles).
Dr. Charles H. Brown, Wichita Falls—*Dementia Praecox, therapy* (22 articles).
Dr. G. H. Wood, Big Spring—*Mycosis* (9 articles).
Dr. S. P. Sellers, Honey Grove—*Ultraviolet Rays* (7 articles).
Dr. Robert F. Thompson, El Paso—(1 journal).
Mrs. W. E. Frashuer, Robstown—(2 journals).
Dr. Mildred L. Cooke, Belton—(1 book).
Dr. Robert J. Hanks, Sanatorium—*Lungs, mycosis* (10 articles).
Dr. M. W. Rogers, Rule—*Mental Diseases, therapy* (13 articles).
Dr. R. M. Bellamy, Pampa—*Pneumoconiosis* (13 articles).
Dr. J. J. Shiller, Rowena—*Seminal Vesicles, diseases* (19 articles).
Dr. M. H. Moore, Tyler—*Fistula, bronchopleural* (4 articles).
Dr. E. K. Doak, Taylor—*Estrogens, therapy* (5 articles).
Dr. Elliott Mendenhall, Dallas—*Heart, tumor* (10 articles).
Dr. G. H. Ricks, Brady—*Hernia, therapy* (19 articles).
Dr. Neill Simpson, Waco—*Syphilis, therapy* (5 articles).
Dr. R. W. Loveless, Lamesa—*Dysmenorrhea, therapy* (22 articles).
Dr. W. M. Boguskie, Hearne—*Undulant Fever* (26 articles).
Dr. Chas. F. Bailey, Ballinger—*Anesthesia, in gynecology and obstetrics* (20 articles).
Dr. J. W. Youngblood, Stamford—*Respiratory Tract, diseases* (20 articles).
Dr. G. S. Smith, Lubbock—*Splanchnoptosis* (9 articles).
Dr. E. K. Doak, Taylor—*Vagina, secretion* (7 articles).
Dr. J. W. Ray, Timpson—*Intestines, foreign bodies* (5 articles).

Accessions

W. B. Saunders Company, Philadelphia—Christopher: Minor Surgery, fourth edition; Levine: Clinical Heart Disease, second edition; MacCallum: A Textbook of Pathology, seventh edition.

Summary

Reprints received, 960.	Local users, 40.
Journals received, 149.	Borrowers by mail, 49.
Items consulted, 195.	Packages mailed out, 53.
Items taken out, 207.	Items mailed out, 532.

Total items consulted and loaned, 934.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Nonofficial Remedies:

Magnesium Trisilicate.—Magnesium meso-trisilicate ($2Mg0.3Si0^2.nH^20$). The magnesium salt of meso-(deutero-) trisilicic acid. It neutralizes the hydrochloric acid of the gastric juice by chemical action and probably by absorption. It absorbs various other substances, including alkaloids and pepsin, but it does not interfere with peptic digestion nor does it induce alkalosis. It is nontoxic in ordinary amounts, but large doses sometimes induce diarrhea because of the magnesium chloride formed. It is used for the relief of gastric hyperacidity and pain in gastric and duodenal ulcer.

Magnesium Trisilicate-Mallinckrodt.—A brand of magnesium trisilicate-N. N. R. Mallinckrodt Chemical Works, St. Louis, Mo.

I. V. C. Halibut Liver Oil With Viosterol (A. R. P. I. Process) in Oil.—A brand of halibut liver oil with viosterol-N. N. R. (New and Nonofficial Remedies, 1939, p. 517). It is supplied in the form of soluble gelatin capsules, 3 minims. Each capsule contains 8,500 U. S. P. units of vitamin A and 1,700 U. S. P. units of vitamin D. International Vitamin Corporation, New York.—*J. A. M. A.*, April 6, 1940.

Capsules Estriol, 0.24 mg.—Each capsule contains estriol (New and Nonofficial Remedies, 1939, p. 348) 0.24 mg. diluted with milk sugar. Abbott Laboratories, North Chicago, Ill.

Ampoules Sodium Cacodylate-Upjohn, 0.05 Gm. (¾ grain), 1 cc.—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104), 0.05 Gm. (¾ grain). Upjohn Company, Kalamazoo, Mich.

Ampoules Sodium Cacodylate-Upjohn, 0.1 Gm. (1½ grains), 1 cc.—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104) 0.1 Gm. (1½ grains). Upjohn Company, Kalamazoo, Mich.

Ampoules Sodium Cacodylate-Upjohn, 0.2 Gm. (3 grains), 1 cc.—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104) 0.2 Gm. (3 grains). Upjohn Company, Kalamazoo, Mich.

ACCEPTED DEVICES FOR PHYSICAL THERAPY

The following devices have been accepted by the Council on Physical Therapy of the American Medical Association for inclusion in its list of accepted devices for physical therapy:

B-K Plant Emergency Inhalator.—This is a portable device that can be attached to any standard cylinder of oxygen or oxygen-carbon dioxide mixtures for plant emergency treatment of respiratory failure or asphyxia. This unit differs from the B-K Inhalator (*The Journal of the American Medical Association*, Sept. 5, 1936, p. 790) only in not being fitted in a carrying case with two small tanks, but rather it may be attached to any gas tank for plant use. The apparatus provides automatic control of the flow, is self compensating to the needs of the patient and thus delivers the volume of gas as determined by the pressure in the patient's lungs. If necessary, one person can operate the mechanism and administer artificial resuscitation. Bishinger-Koehler Manufacturing Company, Pittsburgh.

Western Electric Audiometer, Model 6B.—This audiometer is designed to measure the acuity and range of hearing. The instrument and receivers are calibrated independently, so that any Western Electric audiometer can be fitted with any receiver of the Western Electric type for audiometers. Its dimensions are 10 by 12 by 18 inches and it operates on alternating or direct current. Both air and bone conduction receivers are provided as standard equipment. It has a sweep frequency circuit ranging from

128 to 9,747 cycles per second. Octaves, semioctaves and quarter octaves are indicated; others are interpolated. It is calibrated in 5 decibel steps for intensity. The unit has a masking device with a single frequency tone and a transmitter which is optional accessory equipment. Western Electric Company, New York.

PROPAGANDA FOR REFORM

The Effect of Quick Freezing on the Nutritive Values of Foods.—At the request of the Council on Foods of the American Medical Association, Dr. Mary Swartz Rose has prepared a review of available evidence on the nutritive value of quick-frozen foods. Dr. Rose reports that quick freezing is a mode of food preservation which affords the consumer fresh material, free from inedible waste and held in cold storage until delivery. The number of microorganisms in foods is greatly reduced by quick freezing. Extensive studies indicate that there is little danger from foods frozen and held in storage at temperatures below 32° F., but refreezing of products once defrosted is not a safe practice. Vitamin A values in foods are conserved by quick freezing. Vitamin B_1 (thiamin) is not affected by the freezing but considerable loss may occur in the processes of preparing food for quick freezing such as blanching of vegetables. To conserve vitamin B_1, the blanching time should be as short as is compatible with a product satisfactory in other respects. Little if any loss of vitamin G (riboflavin) has been observed in the quick-frozen vegetables investigated. Vitamin C (ascorbic acid) in fruits appears to be conserved by quick freezing and storage at low temperatures. Loss of vitamin C in vegetables depends partly on the completeness of the destruction of the ascorbic acid oxidase in the blanching process and partly on the conditions under which the vegetable is allowed to thaw. Loss in thawing can be avoided by cooking without defrosting. Partly on the basis of Dr. Rose's report the Council has voted to give consideration to quick-frozen vegetables and fruits with a view to inclusion in the list of accepted foods.—*J. A. M. A.*, April 6, 1940.

Serobacterins-Mulford (Sharp & Dohme) Omitted From N. N. R.—In 1914 and 1915 the Council on Pharmacy and Chemistry accepted certain of the "Serobacterins" which were manufactured by the H. K. Mulford Company, as follows: Acne Serobacterin - Mulford, Cholera Serobacterin - Mulford, Staphylo-Serobacterin-Mulford, Typho-Serobacterin-Mulford and Typho-Serobacterin Mixed-Mulford. At that time the Council did not authorize any claims of superiority over nonsensitized vaccine for these serobacterins. In 1937 Sharp & Dohme presented a booklet, "Advantages of Serobacterins in Bacterial Vaccine Therapy." In general the text gave the impression that "Serobacterins" are better than other well known prophylactic vaccines, that they have a wider field of application and that they offer a "degree of passive immunity during the period of lag or 'negative phase' which precedes the development of active immunity in the use of plain bacterial vaccines." The Council requested the firm to show evidence that the serobacterins were superior to ordinary vaccines and especially to show what clinical evidence existed to establish its claim for recent improvements. The firm requested that the report be held in abeyance pending accumulation of additional evidence. In September, 1938, the firm presented data which it stated would aid in the further evaluation of the usefulness of its serobacterins. The Council reported that the evidence does not favor continued recognition of the preparations by the Council. The Council therefore omitted from New and Nonofficial Remedies Acne Serobacterin-Mulford, Cholera Serobacterin-Mulford, Staphylo-Serobacterin-Mulford, Typho-Serobacterin-Mulford, and Typho-Serobacterin Mixed-Mulford.—*J. A. M. A.*, April 13, 1940.

Sulfathiazole and Sulfamethylthiazole.—Recently there have been reports that two derivatives of sulfapyridine, sulfathiazole (2 [para-amino-benzene-sulfonamido] thiazole) and sulfamethylthiazole (2 [para-amino-benzene-sulfonamido) 4-methylthiazole) give some promise of therapeutic effect. The Council on Pharmacy and Chemistry of the American Medical Association has not given consideration to the acceptability of the names sulfathiazole and sulfamethylthiazole. However, since the medical profession has such interest in sulfanilamide and its derivatives, the Council asked Dr. Perrin H. Long to prepare a preliminary report on these two substances. Dr. Long reports that it is too early to pronounce on the comparative clinical therapeutic effects of sulfathiazole and sulfapyridine, but that experience to date indicates that sulfathiazole is about as effective as sulfapyridine in pneumococcic pneumonia in human beings and at least as effective as sulfapyridine, if not more so, in staphylococcic infections in man. Dr. Long concludes: "The evaluation of these new chemotherapeutic compounds will necessitate extensive experimental and clinical investigations in order to determine their efficiency in the control of infections and their clinical toxic manifestations. Until the time when such data are in hand, it is to be hoped that enthusiasms do not outrun common sense." The Council concurs with the conclusions of Dr. Long. The two preparations have not been licensed by the Food and Drug Administration for sale in interstate commerce (as new drugs). This gives opportunity for the medical profession to be informed about the drugs before they are exploited. No firm has submitted these drugs for consideration by the Council.—*J. A. M. A.*, March 9, 1940.

Thiazole Derivatives of Sulfanilamide.—The introduction of sulfanilamide into American therapeutics early in 1937, as was to be expected, was soon followed by the presentation of a derivative representing a combination of pyridine and sulfanilamide, which received the nonproprietary term sulfapyridine. Now comes reports of two more derivatives of sulfanilamide—sulfathiazole and sulfamethylthiazole. A preliminary report of the Council on Pharmacy and Chemistry, prepared by Dr. Perrin H. Long, on these substances appears in *The Journal of the A. M. A.*, March 9, 1940, p. 870. All of these sulfanilamide derivatives are quite similar in their basic character. One group of workers (Herrell and Brown) have stated that sulfamethylthiazole has been found efficient in the treatment of some infections caused by staphylococcus organisms. Further investigation of the effectiveness of the compound in diseases caused by staphylococci is decidedly in order, for if the product is found to be of value in these diseases it certainly will have advantages over sulfanilamide. Again it is fortunate that the product has not been placed on the open market before physicians are given an opportunity to know more about it.—*J. A. M. A.*, March 9, 1940.

Post Office Bans a "Pile Cure."—The Bureau of investigation of the American Medical Association reports that a nostrum business operating from Washington, D. C., under the trade style "Pilocura Company, Inc.," has been declared fraudulent by the Post Office Department and debarred from the mails. Its principal promoters were a Paul W. DeLoe and his wife, Jane B. DeLoe. In his memorandum to the Post Office Department, the Hon. Vincent M. Miles brought out that not only were the DeLoes without medical training but also that no physicians, chemists or pharmacists were connected with the business. The treatment originally was sold over

drug store counters as a liquid under the names "Safe Vegetable Compound" or "SVC." Jane DeLoe claimed she bought the formula from "a little German doctor" who told her he had bought it twenty-five years previously on a trip to Brazil. He claimed, she said, that its efficacy depended on a certain herb unknown in this country. Subsequently the alcohol and three of the ingredients were omitted; the remaining constituents were reduced to tablet form and sold under the name "Pilocura." Examination of the Pilocura tablets, prepared by Burroughs Bros. Mfg. Co., Baltimore, showed that each consisted essentially of large amounts of licorice and rhubarb, as well as some yerba santa and buckthorn (frangula). It was surmised that the yerba santa represented the "little known" Brazilian herb which the promoters of Pilocura played up as one of the ingredients. The government's medical experts testified that yerba santa was used principally as a flavoring ingredient in certain preparations and, except for such slight laxative effect as it might produce in connection with the other ingredients, it was therapeutically worthless as used in Pilocura. The government's medical evidence showed further that the basic causes of hemorrhoids are many and varied and that frequently the conditions and their accompanying pains disappear without resort to medication; further, that such treatments as Pilocura may irritate and aggravate the hemorrhoidal tissue instead of healing it. A fraud order debarring the Pilocura business from the mails was issued on March 24, 1939, against the concern under its several "Pilocura" designations and against the officers and agents as such—*J. A. M. A.*, March 9, 1940.

Misbranded "Patent Medicines."—The Bureau of Investigation of the American Medical Association reports that the following "patent medicines" have been the subject of prosecution by the Food and Drug Administration of the United States Department of Agriculture which enforces the Food, Drug and Cosmetic Act: *Elco Cold Treatment* (Erie Laboratories, Cleveland), containing approximately 2.8 grains of phenacetin and 0.7 grains of acetanilid per capsule. *Furmas* (Erie Laboratories, Cleveland), essentially a mixture of magnesium hydroxide and carbonate, sodium and potassium carbonates and/or bicarbonates, a water-soluble red substance, peppermint oil and water. *Mrs. Bee Health Anodyne Capsules* (Erie Laboratories and Mrs. Bee Health Laboratories, Cleveland), essentially phenacetin, aspirin and caffeine. *Mrs. Bee Hypo-Tonic Pills* (Erie Laboratories and Mrs. Bee Laboratories, Cleveland), chiefly plant material, coated with sugar and iron oxide. *Prescription 333* (Erie Laboratories, Cleveland), essentially aspirin and sodium salicylate.—*J. A. M. A.*, March 9, 1940.

Cha-Gobe Nasal Filter Not Acceptable.—The Council on Physical Therapy reports that the Cha-Gobe Nasal Filter is a small device intended, according to the manufacturer, to be inserted into the nasal openings to provide relief from "hay fever and other nasal irritations caused by dust, flower pollen and animal hair." It consists of a stainless steel wire loop which bridges the nasal septum and holds two wire frames twisted to fit the nasal passages and covered by single-layer bags of silk cloth. It was quite evident from the Council's investigation that this "filter" could not keep back pollen and, therefore, could not prevent hay fever. Since pollen also has a port of entry through the mouth and eyes, prevention of its entry through the nose alone does not provide adequate protection from pollen in any case. The claim is also made that the device will provide relief from head colds. No evidence was submitted to substantiate these claims. The Council voted to reject the Cha-Gobe Nasal Filter for inclusion on the Council's list of accepted devices.—*J. A. M. A.*, April 27, 1940.

NEWS

The Julius Rosenwald Clinical Society, the foremost postgraduate study institution of Negro doctors in Texas, held its eighth meeting May 8-9, at Dallas, informs the Dallas *News*, with an attendance of twenty-five Negro physicians. Meetings were held at the Moorland Branch of the Y. M. C. A. and at Baylor Hospital, where members of the faculty of the Baylor University College of Medicine gave lectures. Lecturers included Dr. Charles B. Shuey, who spoke on allergies which show up in Negroes as an irritation of nerve terminals rather than as a rash; Dr. Alexander W. Terrell, who spoke on new methods of treating diabetes, which disease is on the increase among Negroes, and Dr. Everett C. Fox, who discussed the treatment of syphilis. There are some 150 Negro physicians in Texas.

Perlman Memorial Hospital, Carthage, was formally opened May 12, informs the Carthage *Watchman*. The building is a two-story structure. The second story provides rooms for private patients, wards, and nurses quarters. Quarters for Negro patients are arranged on the first floor. The hospital provides a surgery, x-ray laboratory, obstetric room, emergency room and the usual hospital facilities, all furnished with the latest equipment. Six graduate nurses will be used in connection with the institution, which will be operated by Dr. Samuel Perlman.

The Texas Society of X-ray Technicians held its annual meeting at the Baker Hotel, Dallas, April 19-20, advises the Dallas *Journal*. Sixty-five delegates attended from all parts of the State. Radiologists addressing the meeting included Dr. Glenn Carlson, Dallas, and Dr. L. W. Baird, Temple.

The Northwest Texas Hospital, Amarillo, formally opened its new and remodeled old unit April 16, reports the Amarillo *Sunday News and Globe*. The new unit doubles the capacity of the institution. The old unit had a normal capacity of sixty beds with a maximum of seventy-five beds. The present hospital has a combined normal capacity of 125 beds with a maximum of 150 beds.

Included in the new improvements are a new nurses home which cost approximately $50,000.

The present building program was financed through a $165,000 county bond issue and a P. W. A. grant of $135,000, which, with the accrued interest of $9,000, made a total contribution of $144,000 for the Federal Government.

On the first floor of the new unit is an emergency receiving room, a kitchen, dining room for nurses and hospital employees and rooms for eighteen additional patients, in addition to record and store rooms. On the second floor is housed the administration office, space for which has been doubled, enlarged laboratory and x-ray departments, an enlarged pharmacy, and eighteen additional patients' rooms.

The third floor of the new unit is devoted to obstetrics. A nursery has been added with twenty-five bassinets. The entire fourth floor of the new building is devoted to surgery, including two major operating rooms, two minor operating rooms, sterilizing and instrument rooms, obstetric rooms, a fracture room, a dental surgery, reception and dressing rooms for doctors and a small waiting room. The enlarged institution will provide needed hospital facilities for Amarillo and the territory it serves.

The Texas Tuberculosis Association concluded its thirty-first annual meeting at Corpus Christi, April

11-13, with the election of the following officers: President, Dr. E. G. Faber, Tyler; first vice-president, M. B. Finley, San Benito; second vice-president, Dr. H. Y. Swayze, Kerrville; secretary, J. W. Butler, Galveston; and treasurer, H. A. Wroe, Austin. The meeting was attended by 200 delegates.

An interesting feature in connection with the meeting was a reception honoring the following pioneer members of the Association: Dr. W. M. Brumby, Houston; Dr. Z. T. Scott, Austin; Dr. Elva A. Wright, Houston; J. W. Butler, Galveston; H. A. Wroe, Austin; Dr. R. B. Homan, Sr., El Paso; Dr. J. B. McKnight, Sanatorium; Dr. John Potts, Fort Worth; Dr. W. C. Farmer, San Antonio; Dr. Holman Taylor, Fort Worth; Mrs. W. O. Wilkes, Waco; Mrs. Dallas Scarborough, Abilene; Mrs. J. D. Finnegan, Kingsville; Murray G. Thames, Beaumont; James Shelton, Houston; M. B. Finley, San Benito; Thomas W. Hughen, Port Arthur; and Garland R. Farmer, Henderson.

Abbott Laboratories Fellowships in Chemistry.—For the academic year 1940-1941, Abbott Laboratories has established fellowships in several universities with important departments of organic chemistry and biochemistry. The fellowships, carrying stipends of $650 per year, will be available to graduate students in the last or next to last years of graduate work leading to the doctorate degree. The recipients, who are to be selected by the universities in which their work is being done, are not limited as to the subjects on which they will work.

The object of the fellowships is to provide means for the carrying on of additional scientific work in American universities. The future progress of chemical developments in this country will depend upon the availability of well-trained and qualified men, and it is the intent of Abbott Laboratories in establishing these fellowships to lend encouragement in these general fields.

Grants will be made to the following universities for fellowships in organic chemistry: Cornell, Harvard, Illinois, Michigan, and to the following universities in fellowships in biochemistry: California, Columbia, Cornell.

Osler Memorial at Blockley Dedicated.—The old autopsy house where Osler worked at Blockley (Philadelphia General Hospital) has been restored as the Osler Memorial Building, and will be dedicated on the grounds of the Philadelphia General Hospital, at Curie Avenue, near 34th and Pine Streets, Philadelphia, Pennsylvania, at 2:00 p. m., on June 8, 1940.

Original furnishings, including the necropsy table, have been collected. The painting by Dean Cornwell, N. A., of New York, entitled "Osler at old Blockley," later to be hung in the building will be on exhibition during the celebration.

There are facilities in the building for the housing and preservation of relics of old Blockley, as well as Osleriana. The Committee would welcome any additions to this collection.

A cordial invitation is extended to those who are interested, and especially those who are planning to attend the American Medical Association Convention in New York City, June 10-14.

City and Rural Health Conservation Winners.—The Chamber of Commerce of the United States recently announced winners in its 1939 city and rural health conservation contest. Dallas was awarded merit in Group II, cities from 150,000 to 500,000 population. Award of merit was also given to Dallas County and the Tyler-Smith Health Unit in the South Central health division. El Paso County received a special award for having won the award for two years in its geographical district and for having maintained a high standard of achievement.

SOCIETY NEWS

Bell County Society

April 3, 1940

(Reported by R. R. Curtis, Secretary)

So-called Stroke in Elderly People—P. M. Bassel, Temple.
Sulfanilamide in Urology—C. M. Simpson, Temple.
The Acute Leukemias—W. N. Powell, Temple.
The Roentgenologic Diagnosis of Calcified Pelvic Tumors—C. A. Stevenson, Temple.
The Relationship between Occupation and Skin Cancer in Texas—Charles Phillips, Temple.

Bell County Medical Society met April 3, 1940, at the Doering Hotel, Temple, with twenty-nine members and two guests present. The invocation was given by J. M. Frazier.

Following a dinner, a business and scientific session was held.

Bertha McDavitt moved that a telegram of sympathy be sent to Dr. A. C. Scott, Sr., ill in a hospital in Albuquerque, New Mexico, which motion carried.

W. A. Smith, director of the venereal disease division of the State Department of Health, explained the program of that department, and the procedure used in distributing drugs to members of county medical societies for the treatment of indigent venereal disease patients.

The Society voted to adopt the program as outlined by Dr. Smith, designating the county health officer for Belton and the city health officer of Temple as the distributing agents of the drugs. It was also voted that decision as to indigency should be left to the individual physician, and in the case of question by either of the distributing agents the matter would be referred to the board of censors of the Society for decision.

The scentific program as given above was then presented.

Bexar County Society

March 14, 1940

(Reported by W. W. Bondurant, Jr., Secretary)

X-ray Treatment of Ewing's Tumor—R. H. Crockett, San Antonio.
Cervical Endometriosis—S. Foster Moore, Jr., San Antonio.
Uterine Endometriosis—T. A. Pressly, San Antonio.

Bexar County Medical Society met March 14, in the Medical Library Building, San Antonio, with Herbert Hill, president, presiding. Lee Rice, program chairman, made an announcement regarding programs for the Society for 1940.

M. A. Childers, Jr., program chairman for the evening, presented the scientific program given above.

X-RAY TREATMENT OF EWING'S TUMOR (R. H. Crockett.)—Endothelioma of bone is classified as (1) solitary cystic, (2) multiple, and (3) Ewing's tumor. Ewing's tumor is susceptible to x-radiation if diagnosed early. It occurs in patients between the ages of 5 to 15 and composes from 10 to 15 per cent of bone tumors. It usually occurs in a long bone. Low grade fever may be present. Tumefaction may increase or decrease. Inflammatory disease of bone may be the original diagnosis. The tumor is soft and may be incised and its contents resemble pus, but it will progress in spite of treatment. The origin of the tumor may be the lymphatic tissue. There are four characteristics of Ewing's tumor: (1) absorption of bone and never formation of bone; (2) slow metastasis; (3) invasion of small parts, and (4) prompt regression with x-radiation. Before metastasis, x-radiation will relieve. This tumor must be differentiated from osteogenic sarcoma, multiple myeloma, metastatic and other bone tumors. Biopsy does not make the prognosis worse. Some advise radiation and if the tumor fails to respond in six weeks, surgical treatment.

A case of Ewing's tumor of the radius was reported in a boy, age 5. Temperature was 100° and the leukocyte count 17,500. The x-ray diagnosis was chronic osteomyelitis. The exploratory operation showed callus formation and a necrosis, but drainage did not reduce the tumor. Therefore, x-radiation in guarded doses was given. One month later lung metastasis was noted. X-radiation was again given and the child was sent home with a hopeless prognosis. In three months he returned and looked well. He died thirteen months after being seen first. Roentgenograms of the case before and after treatment was shown.

Milton Davis, in discussing the case, stated that it was a primary bone tumor. Trauma may have had something to do with starting it. The presence of pain, swelling in the middle third of the shaft, and leukocytosis all helped in the diagnosis, but the x-ray examination is diagnostic in 60 to 70 per cent of cases. In the remainder the x-ray therapeutic test or biopsy will decide. If metastasis is present radiation should be given. If the lesion is local and of short duration—from one to two months with no metastasis—surgical treatment should be used, followed with radiation. The radiation should be as heavy as possible the first dose. The tumor becomes resistent quickly.

O. J. Potthast stated that the acidosis treatment is of no value. If metastasis is present Coley's toxin is of no value but he expects to give Coley's toxin in the next case that presents.

Dr. Crockett, in closing the discussion, quoted Kaplan on therapy. He does not re-treat any area from six to twelve weeks and sometimes waits for x-ray evidence of recurrence. He uses a number of ports if available.

Cervical Endometriosis (S. Foster Moore, Jr.).—This condition has always been pathological rather than clinical. Two cases have been observed recently by the author in which the endometriosis could be seen. The patient in the first case was 32 years of age, with cycles from four to ten weeks and dysmenorrhea of the onset type. She had a normal child in 1934. In November, 1939, the menses would appear from ten to twenty-one days and were of the spotty type of bleeding. In 1937, cauterization of the cervix was done with dilatation and curettage for a purulent discharge, which recurred six months later. The patient had questionable relief from estrogen. There were two areas of endometriosis on the cervix. These were removed surgically and the patient received relief from profuse bleeding.

The second case was similar to the first, that is, the lesions were similar. No biopsy was done. The patient had never had a normal period. Both patients had curettements at which time the cervix was cauterized deeply. Both showed evidence of a hyperestrogenic condition.

Uterine Endometriosis (T. A. Pressly).—A study of 639 hysterectomies revealed 18 instances of adenomyosis and 151 adenomyomas. These lesions were present in 10.8 per cent of the cases. In this, the internal type of endometriosis, the gland tubules and stroma invade or appear deep in the uterine wall. They react just as does the mucosa of the uterus. The youngest patient in the series was 23, the oldest 63. Eight of the patients had not borne children, fifty-seven had borne children and there was no record in four cases. The symptoms complained of were: (1) pain down the sides, (2) cramps before and during the menstrual period, beginning with the flow and ceasing with its continuation, and (3) prolonged and sometimes almost continuous bleeding, with perhaps profuse blackish or pinkish continuous discharge. The uterus may be more tender than normal. No relief follows curettement. The treatment consists of removal of the ovaries or fibromyoma. The essayist advises hysterectomy.

Henry Hartman in discussing the paper, gave a classification of uterine endometriosis as (1) adenomyosis, minor form; (2) adenomyoma or endometriosis, which may be (a) local or (b) diffuse, the more frequent form. The condition is frequently associated with endometrial hyperplasia and with uterine fibroids. Hyperestrinism is responsible for the condition. Numerous follicular cysts are found in the ovaries which are the source of the hyperestrinism. A carefully taken history is supposed to enable one to make the diagnosis. In the early years the menses are normal. The endometriosis dysmenorrhea (beginning with bleeding and getting worse for several days) gets worse from period to period. Functional uterine hemorrhage occurs because hyperplasia is present concomitantly. Sterility develops in 60 per cent of the cases because multiple follicular cysts are present in the ovary and the ova are not liberated to be fertilized.

A. G. Cowles, in discussing the papers, stated that he could hardly visualize endometriosis limited to the cervix without other lesions in the uterus or pelvis.

Alvin O. Severance stated that Cullen's theory of invasion has been accepted. Simpson thinks there is regurgitation through the tubes to the peritoneum. Metaplasia of the vestigial remnants of the mullerian duct may rarely occur.

Dr. Moore, in closing the discussion, stated that endometriosis is seldom diagnosed until the pathologist studies a section. Many cases are self limited and clear up of their own accord. He stated that the two cases he had reported had no indication of endometriosis elsewhere.

Dr. Pressly, in closing the discussion, stated that the clinical diagnosis in this series of cases studied was very rare.

Resolutions of condolence were adopted on the death of Dr. Ferdinand C. Walsh.

Big Bend Counties Society

May 7, 1940

(Reported by Joel Wright, Secretary)

Gastroscopy (lantern slides)—Norman Giere, El Paso.
Report of a Case of Gastric Hemorrhage—Malone Hill, Alpine.
Allergy—Orville Egbert, El Paso.

The Big Bend (Pecos-Jeff Davis-Presidio-Brewster) Counties Medical Society met May 7, at Sanderson, with R. E. Lester and J. Campbell Kern, president, as hosts at a dinner. Twelve members and five visitors were present.

After dinner the scientific program as given above was carried out. Each presentation was followed by general discussion with questions and answers which enhanced the value of the papers.

Joel Wright, secretary, discussed the work of the National Physicians Committee for the Extension of Medical Service, particularly the educational campaign now in progress of development through display presentations in the *Saturday Evening Post* and other magazines.

The Society was invited by Alpine members to hold the next regular meeting in June at Alpine.

Orville Egbert extended a cordial invitation to attend the Clinical Congress of the Southwestern Medical and Surgical Association at Tucson, Arizona, in November.

Clay-Montague-Wise Counties Society

March 28, 1940

(Reported by W. T. Inabnett, Secretary)

Treatment and Care of Traumatic Injuries—E. W. Wright, Bowie.
Relationship of Prolapsed Vertebral Discs to Sciatica and the Methods of Diagnosis and Treatment—Charles F. Clayton, Fort Worth.
The Management of Head Injuries and Their Sequelae—C. C. Nash, Dallas.

Clay - Montague - Wise Counties Medical Society members were the guests of Drs. E. W. Wright and J. T. Lawson, at a meeting in the First Methodist Church, Bowie, on March 28. Eleven members and four guests were present and the scientific program as given above was carried out.

Dr. Wright stressed in his paper the great need for proper handling of cases of traumatic injury to lessen post-traumatic infections and other serious complications which might result from negligent care of accidental wounds.

Dr. Clayton's presentation was illustrated with x-ray studies.

Dr. Nash's paper stressed the necessity of rest for the patient with the postponement of unnecessary handling such as x-ray study, and so forth, until the primary effects of shock were removed. He recommended fluids intravenously, frequent spinal punctures, and sedation for the brain injury case uncomplicated by depressed fractures.

Denton County Society

April 4, 1940

(Reported by Eva E. Strahan, Secretary)

Denton County Medical Society met April 4, in Denton. A discussion was had of the Group Hospital Service, Inc. of Texas, following which the plan of this group was approved.

El Paso County Society

April 22, 1940

(Reported by M. P. Spearman)

Tetanus—C. E. Jumper, El Paso.
Blood Coagulation—W. W. Waite, El Paso.

El Paso County Medical Society met April 22, in the tea room of the Hotel Cortez, El Paso, and the scientific program as given above was carried out.

Galveston County Society

April 12, 1940

(Reported by James H. Bennett, Secretary)

Anemia in the Neo-natal Period—Boyd Reading, Galveston.
Biochemical Aspects of Hematology—M. Bodansky, Galveston.
Hemachromatosis: Report of Six Cases—J. C. Cain, Galveston.

Galveston County Medical Society met April 12. The scientific program as given above was carried out.

May 3, 1940

The Hippuric Acid Synthesis Test for Liver Function—D. L. Curb, Galveston.
The Major Complications of Pneumothorax Therapy, Their Recognition and Management—L. W. Sheckles, Jr., Galveston.
Mixed Tumors of the Salivary Glands—N. Duren, Galveston.

Galveston County Medical Society met May 3. The scientific program as given above was carried out.

N. Duren was elected to membership on application.

Harris County Society

February 21, 1940

Fractures of the Lower End of the Humerus Involving the Elbow Joint—Joe B. Foster, Houston.
Discussion of Aneurysms with Report of Cases—P. H. Scardino, Houston.
Intravenous Anethesia—R. W. Reed.
Pentothal Sodium Anesthesia (intravenous ansethesia) (Motion Picture)—Abbott Company.

Harris County Medical Society met February 21, with eighty-two members and one visitor present. J. Harolde Turner, vice-president, presided and the scientific program as given above was carried out.

Fractures of the Lower End of the Humerus Involving the Elbow Joint (Joe B. Foster).—

L. E. Williford: In fractures of the elbow, we are concerned with the amount of callus formed. An excess amount limits the motion and hence the results. In the incision used by Dr. Foster, it is often important to get the true status of the comminution from x-ray study. It is much more important to get accurate reduction of the fracture in the older individual than in children. The accuracy with which the reduction is accomplished will determine the amount of callus that the elbow throws out for healing. Hardware will hold the arm more accurately in place, and keeping the arm immobilized will increase the rapidity of return to function. Dr. Foster alluded to the use of sulfanilamide in compound fractures, orally. Literature records very favorable results from its use in this manner, but sulfanilamide has shown to be entirely bacteriostatic and has produced no germicidal value.

B. T. Vanzant: I want to stress the necessity of accurate apposition which is inversely proportionate to the patient's age—the younger the patient, the more liberal the reduction.

Discussion of Aneurysms with Report of Cases (P. H. Scardino).—

C. C. Green: I had the pleasure of studying with Dr. Matas of the Charity Hospital in New Orleans, who has probably done more of this work than anyone in the world. I think the reason so much of this comes late in life is because it is in the late stages of syphilis, tertiary syphilis. The fusiform type of aneurysm is most common. We must determine if sufficient collateral circulation takes place. Dr. Matas' method was to unite by clamps or metal bands and press over the aneurysms. The clamps were removed if the circulation was found to be bad. It is better not to use the Penrose drain. Pressure is better on soft parts. This is a very good review and I want to congratulate Dr. Scardino.

B. T. Vanzant: Dr. Scardino gave a well rounded out paper. There is one point that I would like to ask about diagnosis—would it be better to inject a soluble radio-opaque material?

J. R. Phillips: In the arteriovenous aneurysm or fistulous type, the extremity is warmer. It can be determined from the oxygen content of blood which has been withdrawn. Ductus arteriosus can be ligated safely. Diagnosis is best done after 7 years of age. Patients should be operated on early because they develop better cardiac compensation. I have a child 3 years of age in whom the diagnosis is not clearly defined, but is being observed.

The paper was further discussed by J. L. Taylor.

Dr. Scardino, closing: In answering Dr. Vanzant, the use of a radio-active substance is dangerous. Sodium iodide will help diagnosis.

Intravenous Anesthesia (R. W. Reed).—

T. D. Cronin: This method is good for induction where it is desired to switch to gas or ether. Patients beg for it. It is not an anesthetic for office use. It is of value in throat cases where the larynx is thoroughly cocainized. In using a 5 per cent solution, a percentage of cases had phlebitis; by using a 2.5 per cent solution, this was not true. The paper was also discussed by R. F. Bonham.

A motion picture, "Pentothal Sodium Anesthesia (intravenous anesthesia)" was shown through the courtesy of the Abbott Company.

February 28, 1940

Harris County Medical Society held a regular business meeting February 28, with 130 members present. J. Harolde Turner, vice-president, presided.

Norma Elles gave a report on the Ripley Settlement House and asked for coöperation in a proposed program which she outlined.

Reports were received from the following boards and committees: *legislation and public health,* read by the secretary; *sick and relief,* Martha A. Wood; *radio,* R. M. Hargrove; *speakers bureau,* John M. Trible; treasurer, J. T. Billups.

G. Q. Adams and M. K. O'Heeron, new members, were introduced and presented with copies of the constitution and by-laws of the Society and the Code of Ethics of the American Medical Association.

L. L. D. Tuttle gave a report of the Associated Milk Producers, which organization has been furnishing milk to needy children. M. D. Levy moved that this project be endorsed by the Society, and that the secretary be instructed to write letters to the dairies concerned asking them to continue their service, which motion was seconded by J. M. Trible and carried.

C. M. Warner moved that a committee be created to coördinate the various organizations of the Society. B. T. Vanzant amended the motion that the proposed committee should include the chairman of the board of censors, following which the motion as amended was carried.

New Members.—M. G. Bloom, H. H. Cutler, T. H. Guthrie, J. C. Holsomback, N. A. Kilgore, and A. P. Overgaard were elected to membership.

March 6, 1940

Diagnosis and Treatment of Addison's Disease—H. H. Cutler, Houston.

Deformities Resulting from Inadequately Treated Basal Cell Epitheliomas: Case Report—T. D. Cronin, Houston.

Selective Treatment of Cancer of the Larynx—John H. Foster, Houston.

Harris County Medical Society met March 6, with sixty-eight members present. A. E. Greer, president, presided, and the scientific program as given above was carried out.

DIAGNOSIS AND TREATMENT OF ADDISON'S DISEASE (H. H. Cutler).—

M. D. Levy: I think that this paper of Dr. Cutler's needs very little comment. He has covered a large subject in a brief and concise manner that will enable us to differentiate these cases quicker. A lot of these cases of early asthenia may have been these early types of Addison's disease. They should be studied with proper laboratory facilities. The new method of treatment is a distinct advance. When the old treatment was used the outlook was fatal but the new procedure offers some definite hope for the patient. At first the actual amount of extract the patient needs is determined. I had the privilege of observing some of these cases and was shown the method in which the pellets were manufactured. That was the greatest drawback to the use of them. They take these molds with chisel and hammer-like instruments and pound the tablet down to the proper size; then it is taken and put underneath the patient's skin. With this instrument, they do not have to make an incision. They plunge the tablet under the skin, release the pellet and there is no wound at all. Pellets last from four to ten months. They are absorbed very slowly and the amount the patient uses every month has been calculated accurately. The drawback in using these pellets is that they will never be manufactured commercially because the houses would be liable for any infection produced in their use. This treatment can be carried out only where they are made. They hope that they will be able to get them made so that they can be administered without any danger. I think that if we keep Addison's disease in mind in unusual cases, we may be able with proper examinations and proper tests to determine cases earlier than we have before. Dr. Cutler's paper brings to our attention that these cases should not be looked upon as practically hopeless.

DEFORMITIES RESULTING FROM INADEQUATELY TREATED BASAL CELL EPITHELIOMAS: Case Report (T. D. Cronin).—

H. L. D. Kirkham: Any method removing cancer thoroughly will cure the patient. The total growth must be removed. The secondary growth is much more malignant. In regard to surgery or radium, if there is any doubt as to what kind of cell is present, I would want the entire tumor taken off surgically. A basal cell growth may become a squamous cell growth. In regard to involvement in the cartilage and bones if the basal cell reaches the ear, I think it is far wiser to take the entire ear off no matter how small the portion involved is. Sometimes skin grafting is used purely as a dressing but if it takes, so much the better. It is also interesting to know that if the grafting takes, the cancer will not attack the grafted skin, though there may be recurrences elsewhere.

Reginald Platt: This discussion is not prompted by the idea that there is anything new or unusual about prosthetic appliances or this one in particular, except in so far as our individual experience goes. The history of the development of these somewhat parallels that of plastic surgery. In the dental literature of such men as Ambroise Paré during the 15th century and Pierre Fouchard in the 17th century stand out as unusual contributors to the progress of this work. Down through the years there is a long list of distinguished names associated with the continued efforts of men to supplement the deficiency of reparative surgery and thereby helping to rehabilitate the unfortunate sufferers. With the better understanding between the surgeon and the prosthetist that developed from the necessity of that period the foundation for an ever increasing demand for this type of work, as well as a better understanding of its application, has grown.

Such appliances are indicated in cases of congenital deformity where surgical repair is not practicable and in connection with such disease processes where the outcome of surgical repair is sure to meet with failure. But of equal importance is its application in cases where it is desirable to observe the healing of tissue over a period of time, permitting the patient during that time to assume his or her position in society.

While the progress of development of this type of work has been fairly satisfactory, it has not in any sense reached a point where one might conclude that further efforts to improve it would be wasted effort. However, the present applicances are a long step from the wax-soaked sponge used to close interoral defects in the earlier period; and the glycerine-gelatine combination of Hennig, to the well fitting appliances of metal-plastics and rubber that are possible today. It was not until 1828 when a Mr. Snell seemed to have been the first to develop a method for making impressions of the part he desired to fit and constructing these appliances upon models. Prior to that they apparently were constructed by fitting the materials to the part. Since that time Pollin has developed his hydro-collodial impression material which has contributed so much to the development of this work. This material makes it possible to get complicated impressions without subjecting the patient to such severe procedures as were sometimes associated with the use of plaster.

Everett R. Seale: Dr. Cronin is comparing good surgery to sorry radiation. Years ago in the use of both *x*-ray and radium the tendency was to under treat the patient. The fact was we were not using a sufficient amount and another thing was that the old plan of treatment was to treat the patient three or four times a week. When treating with radium, the treatment should be finished in a period of ten days. It is continued radiation that causes trouble. As far as surgical removal is concerned, it is very difficult to tell the extent of the growth. The only way it can possibly be done is by study of nodules on the edges. Even then one frequently finds basal cells far from the main position of the growth. A

good margin around the growth should be removed. Dr. Kirkham and Dr. Cronin mentioned grafting. I have seen several cases in which grafting has been used on the face and it gives the patient a sense of security.

F. J. Slataper: Some people consider a skin cancer as harmless. These cancers are very serious and may lead to the loss of an eye. If a condition extends over the lid and involves the entire lid, the patient will probably lose the eye because the cornea cannot be protected. The basal cell condition can be treated and leave only a small scar and the lid can continue to function. This type seems to be especially malignant. The thing to do when a condition like this occurs is to remove it. Other conditions such as warts or moles should be removed while they are small.

B. T. Vanzant: In regard to treating these conditions with x-rays, we should first determine the size and depth of the growth. It is a fact that the cells are more sensitive to long x-rays than to short penetrating rays. In giving a treatment, a full treatment with the unfiltered ray should be used the first time. X-rays must be properly applied.

F. P. Stevenson: I disagree with Dr. Seale that the sorry surgeon should not use x-ray or vice versa.

Selective Treatment of Cancer of the Larynx (John H. Foster.)—

George F. Mood: The patients in the first several cases in which the larynx was removed died. In the cases that I followed after that for the next few years, some got well but those who did get well had a very stormy convalescence. In the last few years laryngectomy is being used more and more. I believe Dr. Foster has done six in the past year. All of these patients have made a very satisfactory recovery. It is much too early to say that they are cured from the standpoint of the cancer. Two of those have had what amounted to a primary healing and the others have healed. This is due to the fact that he has improved his technic. This summary of the situation has cleared the water a lot for us as far as cancer of the larynx is concerned.

T. D. Cronin: During the past several years, I have had the opportunity to observe and follow cases of cancer of the larynx. The statements of Dr. Foster are in perfect agreement with the very best opinions all over the country.

The paper was further discussed by B. T. Vanzant and Dr. Durant.

Hunt-Rockwall-Rains Counties Society

April 9, 1940

(Reported by M. L. Wilbanks, Secretary)

Tularemia: Case Report; Renal Carbuncle—L. W. Johnson, Terrell.

Superficial X-ray Therapy (lantern slides)—S. D. Whitten, Greenville.

General Consideration in the Use of Radiation Therapy with Reference to Some Specific Diseases—W. M. Dickens, Greenville.

Hunt-Rockwall-Rains Counties Medical Society met April 9, in the Municipal Building, Greenville, with fourteen members and two visitors present. T. C. Strickland, president, presided, and the scientific program as given above was carried out.

The case of tularemia presented by L. W. Johnson was discussed by Joe Becton and O. H. Trimble. The paper on renal carbuncle was discussed by H. W. Maier, W. M. Dickens and M. L. Wilbanks.

General Consideration in the Use of Radiation Therapy with Reference to Some Specific Diseases (W. M. Dickens).—To carry out any form of x-ray therapy properly and effectively the treatment should be planned carefully on (1) findings ascertained in a physical examination; (2) proper preparation of the patient for the treatment; (3) a carefully prepared plan of treatment whether by (a) x-ray, (b) radium, (c) a combination of x-ray and radium, (d) as a preoperative measure, (e) as a postoperative measure, (f) as the treatment *per se*, (g) as a palliative measure; and (5) with regard to metastasis.

The papers of S. D. Whitten and W. M. Dickens were discussed together.

Jefferson County Society

April 8, 1940

(Reported by W. Price Killingsworth, Secretary)

Fracture of the Humerus: Case Report—J. W. Long, Port Arthur.

Recognition and Management of Common Sudden Circulatory Disorders—George Herrmann, Professor of Cardiology, University of Texas School of Medicine, Galveston.

Jefferson County Medical Society met April 8, at St. Mary's Hospital, Port Arthur, with fifty-five members present. J. W. Long, president, presided.

J. W. Long presented an interesting case of fracture of the right humerus in a male, age 28. The fracture occurred just above the elbow while the patient was pitching a baseball. There was no history, clinical or x-ray evidence of bone or joint disease present. X-ray films before and after reduction were shown and the patient was presented. No residual injury or deformity was evident, all motions being free and easy.

Recognition and Management of Common Sudden Circulatory Disorders (George Herrmann).—The first condition discussed by Dr. Herrmann was benign syncopal attacks, further divided into (1) ordinary fainting; (2) vagal fainting, and (3) orthostatic or postural hypotension. With ordinary fainting there is cerebral anemia and splanchnic congestion. The pulse is rapid and the blood pressure low.

In vagal fainting the pulse is slow and the blood pressure low. There is prompt spontaneous recovery. The syncope may be reproduced by pressure over the carotid sinus.

Orthostatic or postural hypotension is a vasosympathetic disorder. In this condition a standing position regularly brings on dizziness and syncope. The blood pressure drops critically low. Ephedrine, benzedrine, and paredrine are temporarily sustaining.

The second major common condition discussed was benign syncopal attacks, further divided into (1) the heart beat, under which were included: (1) paroxysmal auricular tachycardia, and (2) paroxysmal sinus tachycardia. Paroxysmal auricular tachycardia occurs postoperatively and during infections. The onset is sudden and the auricular rate is high, from 180 to 240. The duration is short. There is forced inspiration and expiration against a closed glottis. Therapeutic agents used in the treatment of the condition include ipecac, morphine, quinidine, digitalis, mecholyl, magnesium sulphate. In paroxysmal sinus tachycardia there is a thready pulse with falling blood pressure. The condition usually occurs after coronary occlusion. The rate is not so high, from 160 to 180. Quinidine sulphate is practically a specific remedy. Five grains is given hourly for eight hours.

The third condition discussed was paroxysmal auricular fibrillation. This condition is seen in hyperthyroidism, rheumatic heart disease and coronary disease. Rapid quinidine administration is effective. Sustained digitalization is necessary. This condition is divided into (1) paroxysmal auricular flutter, and (2) heart block with Adams-Stokes convulsive syncope. In paroxysmal auricular flutter the rate is from 130 to 150. Rapid quinidine therapy is effective and temporary digitalization successful.

In heart block Adam-Stokes convulsive syncope there is a shift from normal or partial to complete block. There is sudden ventricular asystole from normal conduction with a suspension of ventricular

contractions. If these stop for three seconds there is a gray, dry palor; for five seconds, vertigo; ten seconds, syncope; sixteen seconds, convulsions, and twenty seconds, cyanosis. Death usually occurs from 90 to 120 seconds after the onset of ventricular asystole. To interrupt asystole sharp blows should be struck to the precordium. Epinephrine, ephedrine and paredrine should be injected either intrajugularly or into the heart.

The fourth major condition discussed was acute anginal failure further divided into (1) angina pectoris; (2) coronary occlusion with myocardial infarction; (3) peripheral circulatory collapse; (4) dissecting aneurysm of the aorta; and (5) acute massive pulmonary embolism.

In angina pectoris there is substernal and precordial pain referred down the arm. The condition is brought on by effort or emotion, is spontaneously relieved and rarely lasts fifteen minutes. The patient assumes the statesque position. Therapy consists of the administration of nitroglycerin and whiskey. There should be restriction of exertion, avoidance of over-eating and nervous strain. Phenobarbital and aminophyllin are helpful.

In coronary occlusion there is persistent pain and there may be extreme dyspnea, and anxiety should be relieved with morphine, pantopon, or dilaudid. Aminophyllin is given in saline and heparin and papaverine are administered.

Peripheral circulatory collapse is evidenced by shock. It is treated with neosynephrin and cortical extract (Eschatin).

In dissecting aneurysm of the aorta there is pain in the back and legs and no electrocardiographic changes.

In acute massive pulmonary embolism there is corpulmonale, overactive conus arteriosis, a basal friction rub and early bizarre electrocardiographic signs. Therapeutic agents used are heparin, morphine, papaverine, oxygen, and aminophyllin. The Trendelenberg position is used for pulmonary embolectomy.

The fifth major condition discussed was acute congestive heart failure divided into (1) sudden acute left ventricular failure; (2) acute right ventricular failure; (3) chronic congestive heart failure.

In sudden acute ventricular failure there is hypertension, aortic regurgitation, orthopnea, Cheyne-Stokes respiration, pulmonary edema; anxiety, air hunger, cough, tracheal rattle, and frothy pink expectoration. The condition is treated with morphine and atropine, intratracheal catheter and suction, oxygen, venesection, intravenous injection of digoxin or digilanid.

Acute right ventricular congestive heart failure is seen in cases of mitral stenosis and beri beri. There is exhaustion, engorgement of neck veins and liver, pain, distention, nausea, ascites, ansarca, and dyspnea. The condition is treated with venesection and paraceutesis of the pleural and peritoneal cavities, intravenous injection of digoxin and digilanid; the administration of isodrene or mercupurin and Vitamin B_1 and B_6. In chronic congestive heart failure fluids and solutions should be restricted. Bed rest, morphine, digitalis, and diuretics are indicated.

The paper was discussed by Seab Lewis, Grady Bevil, Taylor Walker, J. C. Crager, A. R. Autrey, Harris Hosen, H. B. Eisenstadt, and M. N. Newquist.

New Member.—J. A. Bledsoe of Port Arthur was elected to membership.

A committee on hospitals made its report, stating that the committee considered that there is an adequate number of beds in general hospitals in Jefferson County and estimating that 200 tuberculosis beds are needed. Following a discussion of the report, it was rejected and the committee discharged, the prevailing opinion being that approval of the report might hamper or injure future aid from the government for a local charity or county hospital. W. A. Smith moved that further study of the hospital situation be made, which motion was seconded by W. Price Killingsworth and carried.

President Long appointed a committee composed of W. A. Smith, chairman, H. E. Alexander and George Butler, which committee will investigate the needs and consider the possible erection of a charity hospital for Beaumont and Port Arthur or each city separately. P. R. Meyer was appointed chairman of a similar committee for Port Arthur.

Milam County Society

April 9, 1940

(Reported by C. B. Brindley, Secretary)

Sulfanilamide in Urology—C. M. Simpson, Temple.
Old Age Strokes—Paul Bassel, Temple.

Milam County Medical Society met April 9, at the Cameron Hospital, Cameron, with ten members and five visitors present. The scientific program as given above was carried out.

C. M. Simpson, in his discussion of sulfanilamide in urology, asserted that the drug was the best urinary antiseptic yet discovered, but it still falls short of ideal standards. The paper was discussed by W. R. Newton, C. G. Swift, C. B. Brindley, and T. L. Denson.

Paul Bassel in discussing old age strokes stressed the importance of considering the possibility of the presence of a brain tumor in aged paralytics, especially when the blood pressure is below 150 systolic, when headaches are especially prominent, or when multiple convulsions are present. The paper was discussed by T. L. Denson and Edward Rischar.

Other Proceedings.—A. M. Dashiell from the State Health Department presented a plan and proposed budget for a bi-county health unit to be established in Milam and Robertson Counties with headquarters in Cameron. Such unit would be financed by the State Health Department and the two counties concerned. The estimated annual expense of Milam County was $2900, only $1600 more than is being spent at the present for a county health nurse. The Society voted its approval of the proposed unit.

Runnels County Society

April 18, 1940

(Reported by O. H. Chandler, Secretary)

Hemorrhage of the Gastro-intestinal Tract—Earl D. Sellers, Abilene.
Fundamentals in Management of Fractures—Frank C. Hodges, Abilene.

Runnels County Medical Society met April 18, in Winters, and the scientific program as given above was carried out.

The next meeting will be in Ballinger, June 13.

Tarrant County Society

April 16, 1940

(Reported by Craig Munter, Secretary)

Early Manifestations of Syphilis—Porter Brown, Fort Worth.
The Advantages and Disadvantages of Pre-employment Examinations—Ross Trigg, Fort Worth.
Undulant Fever—L. P. Hightower, Fort Worth.

Tarrant County Medical Society met April 16, with fifty-five members and two visitors present. The scientific program as given above was carried out.

The paper of Porter Brown was discussed by Ross Trigg, Frank Schoonover, W. G. Phillips, C. P. Schenck and Burke Brewster. The paper of Ross Trigg was discussed by W. G. Phillips and M. J. Pescor.

The paper of L. P. Hightower was discussed by Philip B. Marquart, S. E. Stout, Ross Trigg, Bert C. Ball, and Harold M. Williams.

New Member.—G. F. Rozelle, Jr., was elected to intern membership.

Alexander Keller Doss was elected to membership by transfer from the Olmsted-Houston-Filmore-Dodge Counties Medical Society of Minnesota.

A discussion was had in regard to recognition by the Society of the Fort Worth Eye, Ear, Nose and Throat Society as a representative unit to hear papers for presentation at the annual session of the State Medical Association. Frank S. Schoonover moved that the Tarrant County Medical Society formally recognize the Fort Worth Eye, Ear, Nose and Throat Society as a representative group of the Society to hear papers for presentation before the Section on Eye, Ear, Nose and Throat at the annual session, which motion was seconded by W. G. Phillips and carried.

Frank S. Schoonover, chairman of a fact finding committee on hospitalization insurance, gave the report of that committee, recommending the adoption and promotion of group hospitalization insurance as offered by Group Hospital Service, Inc.

Porter Brown moved that the report of the committee be adopted, which motion was seconded by Nelson L. Dunn and carried.

The attendance prize, a radio, was won by S. E. Stout.

May 7, 1940

Sulfanilamide in Treatment of Undulant Fever—Will S. Horn, Fort Worth.
Prenatal Care—C. P. Hawkins, Fort Worth.
Habitual Abortion, Treatment—Herbert Beavers, Fort Worth. (Read by R. G. Scohee.)

Tarrant County Medical Society met May 7, with seventy-seven members and three visitors present. The scientific program as given above was carried out.

The papers were discussed by T. C. Terrell and R. L. Grogan.

Other Proceedings.—John J. Andujar, chairman of the intern relationships committee, announced that the intern case report contest was concluded, the winners being R. G. Scobee, Harris Memorial Hospital, and William Sedzwick, City-County Hospital, Fort Worth. The winners will present their respective papers at the next meeting of the Society, May 21.

New Member.—J. B. Shannon was elected to membership.

Honorary Member.—The secretary read a communication from R. L. Grogan, chairman of the membership committee, recommending that I. A. Withers of Fort Worth be elected to honorary membership. Will S. Horn moved that I. A. Withers be elected to honorary membership, which motion was seconded by Nelson L. Dunn and carried.

Bert C. Ball moved that the Society buy cushions for chairs in the Medical Hall, which motion was seconded by O. R. Grogan. Following discussion, John M. Furman moved that the motion be tabled, which motion was seconded by W. C. Lackey.

The secretary read a letter from the Fort Worth-Tarrant County Tuberculosis Society thanking members of the Society for their cooperation during the early diagnosis campaign during the past month.

Walten H. McKenzie asked if members of the Society had read the literature put out by the National Physicians Committee, or had studied any of the objectives of the committee, from the standpoint of giving consideration to assisting the committee. He stated that he and several other members of the Society had made small contributions. Following discussion it was moved by W. G. Phillips that the matter be referred to the board of directors for consideration and report at the next meeting, which motion was seconded by John M. Furman and carried.

The attendance prize, an electric razor, was won by Walten H. McKenzie.

CHANGES OF ADDRESS

Dr. J. B. Barnett, from Thornton to Marlin.

Dr. Wheeler Bell, from San Antonio to Warrington, Florida.

Dr. Paul V. Colvin, from Longview to Kelly Field.

Dr. Arlin B. Cooper, from San Marcos to Ben Wheeler.

Dr. Frank M. Dille, from Greeley, Colorado to Las Animas, Colorado.

Dr. Clarence Edens, from San Marcos to Tyler.

Dr. O. J. Emery, from Rochester to Rule.

Dr. B. H. Estess, from New Braunfels to Austin.

Dr. E. W. Gessler, from LaGrange, Illinois, to Cleveland, Ohio.

Dr. Joseph L. Hall, from Roscoe to Stanton.

Dr. John M. Hooper, from Baltimore, Maryland, to McKinney.

Dr. James R. Jeter, from Sherman to Ennis.

Dr. D. H. Kaump, from Temple to Detroit, Michigan.

Dr. Louis F. Knoepp, from Ann Arbor, Michigan, to Shreveport, Louisiana.

Dr. W. M. Meadows, from Mabank to Malakoff.

Dr. W. B. Meyer, from D'Hanis to Hondo.

Dr. N. T. North, from Panama Canal Zone to Mission.

Dr. H. O. Padgett, from Graham to Dallas.

Dr. George F. Rozelle, Jr., from Fort Worth to Trudeau, New York.

Dr. J. S. Shaver, from Newport, Rhode Island to Pearl Harbor, Hawaii.

Dr. J. E. Smith, from Ranger to Weatherford.

Dr. A. L. W. Tackaberry, from New Waverly to Humble.

Dr. John Hale Walker, from Fort Sill, Oklahoma to Montezuma, New Mexico.

BOOK NOTES

[1]**Diseases of the Foot.** By Emil D. W. Hauser, M. S., M. D., Assistant Professor of Bone and Joint Surgery, Northwestern University Medical School. With a foreword by Sumner L. Koch, M. D. Cloth, 472 pages. Illustrated. Price, $6.00. W. B. Saunders Company, 1939.

The subject of the normal and abnormal foot from infancy throughout life is covered very comprehensively in this text. Dr. Hauser bases his observation upon clinical material from his own extensive practice and from observation in the orthopedic department of the Mayo Clinic. He has evidently made a very extensive review of literature concerning these diseases. Anatomy, physiology and embryology are discussed as well as symptomatology and treatment.

Conservative treatment is described as well as indications and methods of surgical treatment. Several of the author's original methods of treatment are described including his own operation for the correction of hallux valgus. Methods of making and applying arch supports and shoe corrections are given.

The text is not limited to purely orthopedic conditions affecting the feet but includes chapters on circulatory diseases, nerve diseases, skin diseases and infections. Chapters on accessory bones of the feet, arthrosis and tumors are also found. There is a chapter on special technique in the care of the feet which includes methods of strapping, discussion of physical therapy and the application of unna paste boots and walking casts.

The illustrations are unusually good. Because the book is so clearly written it will be of great value

[1]Reviewed by James R. Bost, M. D., Houston, Texas.

to the general practitioner, and because of its completeness it will be of equal value to the orthopedic specialist.

[2]**Clinical Roentgenology of the Alimentary Tract.** By Jacob Buckstein, M. D. Visiting Roentgenologist (Alimentary Tract Division), Bellevue Hospital, New York City; Consultant in Gastro-Enterology, Central Islip Hospital. Cloth, 620 pages, with 525 original illustrations. Price, $10.00. W. B. Saunders Company, Philadelphia and London, 1940.

The author has presented a comprehensive 652 page study of the digestive system. The table of contents is well outlined and indicates how completely each organ is discussed from the standpoint of the infrequent, as well as the more common lesions. For example, thirteen chapters are devoted to the esophagus alone.

There are 525 representative original illustrations. The chapter on the postoperative stomach is a worth while contribution. Sufficient space is given to the proper roentgen evaluation of the normal, as well as the pathologic conditions. Enumeration of the more interesting features of the book would be time consuming. Twenty-two pages are devoted to the subject index.

The wealth of clinical material portrayed and the correlation of the roentgen, operative, and necropsy findings combine to make this study a handy reference and guide for the general practitioner, the gastroenterologist, and the roentgenologist.

[3]**Pneumoconiosis (Silicosis), The Story of Dusty Lungs.** A Preliminary Report. By Lewis Gregory Cole, M. D., Director of Silicotic Research, John B. Pierce Foundation, New York City, and William Gregory Cole, M. D., New York City. Cloth, 52 pages. Price, $1.00. John B. Pierce Foundation, New York, 1940.

The reviewer considers this book invaluable to anyone interested in the serious study of pneumoconiosis from the standpoint of pathology and diagnosis. With an abundance of data obtained from the study of autopsy material roentgenograms, kodachrome photomicrographs, the author has treated his subject somewhat as follows:

I. Explanation of how to prepare specimen for study.

II. Methods of study—1. Palpation and inspection.
2. Macroscopic examination.
3. Microscopic examination.
4. Roentgen examination.

III. Etiology, pathogenesis, pathology, roentgenological findings, clinical history, and clinical course, as well as social, economic, legislative and medicolegal aspects of the four distinct types of pneumoconiosis, each dealt with in order of their severity, and each treated as a different disease.

Type I. Peribronchial-perivascular-lymph node manifestation.

Type II. Nodular pneumoconiosis.

Type III. Pockmarking pneumoconiosis.

Type IV. Acute silicosis.

The author's conception of these four fundamental types, based on pathological, and roentgenological findings, is best illustrated by numerous schematic drawings which are included in an article on roentgenological diagnosis.

The numerous roentgenograms, schematic drawings, and space devoted to x-ray technique increase the value of the book from the standpoint of diagnosis of pneumoconiosis.

[4]**The Essentials of Applied Medical Laboratory Technic.** Details of How to Build and Conduct a Laboratory in Hospital or Office at Small Cost. By J. M. Feder, M. D., Director of Laboratories and Allergic Service, Anderson County Hospital, Anderson, S. C. Illustrated, two plates in color. Cloth, 232 pages. Price, $5.00. Charlotte Medical Press, Charlotte, N. C., 1940.

The author of this little book set out to achieve several aims in his publication. He desired to bridge the gap between the over simplified laboratory manuals on clinical pathology, and the more exhaustive tests. He attempts to furnish concise information for the establishment of clinical laboratories that may be run economically, and with accuracy of results. The book was more intended for the practitioner and the technician, or the worker of limited training and experience. The author's book has probably accomplished these aims as nearly as can be done. Standard methods have, in the main, been followed, though there are many little modifications or "tricks of the trade" of the author's.

In reviewing this book, one realizes that the author has sound training and great experience concerning the things of which he writes. He properly recommends that those running the smaller laboratories secure most reagents from recognized commercial sources, and mentions the source of supply in many cases. He might well have done this in more instances, without being accused of commercial interest. The author may not be as successful in achieving his aims as he hopes. A great many of the less experienced laboratory workers will lack the ability or time to improvise some of the things, or methods, that the author, with his ability and experience, has utilized with so much success. On the other hand, with the higher standards and training required of laboratory workers, this difficulty should soon be obviated. Fortunately, the present day practitioner of medicine in its various fields, is coming to realize that laboratory assistants or technicians, since they are doing diagnostic work, should receive the minimum amount of training as required by the American Society of Clinical Pathologists, and the American Registry of Technicians. This little book will prove well worth while to all types of clinical laboratory workers, not excepting the clinical pathologist himself.

[5]**Fractures, Dislocations and Epiphyseal Separations.** By Harry C. W. S. de Brun, M. D., F. A. C. S. Adjunct Professor of Surgery, New York Polyclinic Medical School and Hospital; Associate Visiting Surgeon, Swedish Hospital, Brooklyn; Consulting Skeletal Surgeon, New York Police Department. Cloth, 457 pages. Price, $3.00. The Year Book Publishers, Inc., Chicago, 1939.

This book, as the author states in the preface, is written entirely for the general surgeon and practitioner, and, of course, makes no effort to achieve the all inclusiveness of most textbooks on fractures and dislocations, although it covers the subject in a fairly concise and simple manner.

The subject matter is divided into four parts. The first part considers the general principles in the management of fractures. In the second part the treatment of specific fractures and epiphyseal separations is considered. The third part concerns dislocations, and in the fourth part specific aids in treatment of fractures are discussed, i. e., plaster of paris, protective time, disability ratings, fracture

[2]Reviewed by G. D. Carlson, M. D., Dallas, Texas.
[3]Reviewed by Carl A. Nau, M. D., Austin, Texas.
[4]Reviewed by Seab J. Lewis, M. D., Beaumont, Texas.
[5]Reviewed by Ruth Jackson, M. D., Dallas, Texas.

service equipment, organization of a hospital and clinic fracture service, physical therapy and roentgenograms. The volume contains a fair number of artists' drawings and photographs of equipment, but is void of the usual x-ray studies which make a textbook of great value from a practical standpoint.

The reviewer feels that this volume will be of value to the general practitioner who needs a reference book on fractures.

DEATHS

Dr. Donnell Bone Braly of Troup, Texas, died suddenly April 21, 1940, at his home, of heart disease.

Dr. Braly was born February 15, 1877, in Mixon, Texas, the son of S. A. Braly and Ellen Phillips Braly. His preliminary education was received in the Summer Hill Select School, Omen, Texas, and his medical education in the University of Nashville, Nashville, Tennessee, from which he graduated in 1907. He began the practice of medicine in Mt. Selman, Texas, where he remained about one year. He then removed to Troup where he had been in active practice until his death.

DR. D. B. BRALY

Dr. Braly was a member of the State Medical Association and American Medical Association through the Cherokee County Medical Society while residing at Mt. Selman and the Smith County Medical Society after his removal to Troup, from 1910 to 1924, from 1926 to 1928, and from 1935 until his death. He was a member of the Eleventh District Medical Society and served one term as vice-president of the Texas Railway Surgeons Association. He was a member of the First Presbyterian Church, which institution he had served as an elder for the past thirty years. He took an active interest in Masonry, having served his Blue Lodge as Worshipful Master three terms. He was a thirty-second degree Mason and a member of the Shrine.

Dr. Braly had enjoyed an extended practice in the community in which he lived and was widely beloved. The influence of his life will be felt for many years.

Dr. Braly is survived by his wife, the former Miss Susan Moore of Troup, to whom he was married December 22, 1907. He is also survived by one daughter, Mrs. Ernest F. Shawver, Houston; two brothers, Joe Braly, Jacksonville, and Dillard Braly, Wichita Falls, and a half brother, J. W. Braly, Palestine.

Dr. John S. Yates of Rosenburg, died April 6, 1940, at his home in that city, of congestive heart failure and chronic nephritis after an extended illness.

Dr. Yates was born September 11, 1875, in Peoria, Texas, the son of J. W. and Mary Yates, a pioneer Texas family. His early education was received in the schools of his community. He taught school for eight years prior to beginning the study of medicine. His medical education was obtained in the medical department of the University of Texas, from which he was graduated in 1903. He began the practice of medicine at Altair, Colorado County, Texas, where he lived for nine months. He then located in Rosenburg, which was his home for the remainder of his professional life.

DR. JOHN S. YATES

Dr. Yates was a member of the Fort Bend County Medical Society, State Medical Association and American Medical Association in 1908, 1910 to 1912, and from 1914 continuously in good standing until his death. It was through the efforts of Dr. Yates and his associates, that the Fort Bend Hospital was established in Rosenburg. For the past several years he had as an associate his son, Dr. C. Wilbur Yates. Dr. Yates was a Scottish Rite Mason and a member of the Woodmen of the World. He had been a constant student of medicine throughout his professional life and was a capable practitioner held in high esteem by his medical associates and the community he served.

Dr. Yates is survived by his wife, formerly Miss Ethel Lea of Liverpool, England, to whom he was married in Corpus Christi, Texas, in 1904. He is also survived by one son, Dr. C. Wilbur Yates, Rosenburg; three daughters, Miss Dorothy Yates, and Mrs. W. F. Peyton, both of Shreveport, Louisiana, and Miss Maidie Ethel Yates, Rosenburg, now a student in the University of Texas; three brothers, Henry Yates, New Mexico; Jack Yates, Waco, and Sam Yates, Hillsboro; and two sisters, Mrs. C. S. Willhoyt, New Mexico, and Mrs. Mary Tarver, Lubbock.

AUXILIARY NOTES

Officers of the Woman's Auxiliary to the State Medical Association of Texas; President, Mrs. S. C. Applewhite, San Antonio; honorary life president, Mrs. A. C. Scott, Sr., Temple; president-elect, Mrs. S. F. Harrington, Dallas; first vice-president, Mrs. William Hibbitts, Texarkana; second vice-president, Mrs. A. E. Moon, Temple; third vice-president, Mrs. A. B. Pumphrey, Fort Worth; fourth vice-president, Mrs. Joe B. Foster, Houston; recording secretary, Mrs. Walter A. Minsch, Kerrville; publicity secretary, Mrs. W. F. Armstrong, Fort Worth; treasurer, Mrs. J. Frank Clark, Abilene; parliamentarian, Mrs. J. W. Tottenham, Brownwood; and corresponding secretary, Mrs. E. W. Coyle, San Antonio.

Mrs. Scott Carter **Applewhite** of San Antonio, twenty-second president of the Woman's Auxiliary

to the State Medical Association of Texas, was formerly Helen Moore, of Seymour, Indiana, the daughter of Frank S. and Josephine Moore.

Her early education was in Seymour. She later attended Knickerbocker Hall, an Episcopal school for girls in Indianapolis, Indiana.

She was married to Dr. Applewhite in Madison, Indiana, in 1907, coming to San Antonio to reside in 1911. Dr. and Mrs. Applewhite have one daughter, Mrs. Robert D. Terhune of New Haven, Connecticut and two grandsons.

MRS. SCOTT CARTER APPLEWHITE

Few women have given greater service to community and State welfare, and many underprivileged children have been rehabilitated through her interest in this field of service.

Mrs. Applewhite was elected president of the Child Protective Society of San Antonio for six consecutive years, and the various agencies through which she has served are reluctant to release her to assume the duties as president of the State Medical Auxiliary. She is also a member of the Bexar County Child Welfare Board, and served for two years on the Committee of Standards for Institutions of State Child Welfare. She was a member of the board of directors of the Protestant Orphans Home for five years, and a charter member of the Day Nursery Board.

For many years Mrs. Applewhite has been an active member of St. Mark's Episcopal Church, being a charter member of St. Mark's Community House Board. The past three years she has served as Social Service Director of the Church.

As an Auxiliary member, Mrs. Applewhite has given devoted service which has endeared her to the County and State Auxiliaries. Her wide experience and good judgment have placed many responsibilities of honor upon her. She has served as President of her local auxiliary and chairman of various committees of the county and state organizations.

Mrs. Applewhite has served the State Auxiliary as fourth vice-president. She has a large circle of friends in social and civic affairs, and the Bexar County Medical Auxiliary feels a just pride that the State has bestowed such high honor on a woman of poise and rich experience.

Under her leadership she may be relied upon to carry to greater heights, the ideals and service to the medical profession and its Auxiliary.

The Dallas Meeting.—The twenty-second annual session of the Woman's Auxiliary to the State Medical Association of Texas was held in Dallas, May 13, 14, 15, and 16, 1940, with a registration of 644.

Meetings of the Nominating and Student Loan Committees were held on Monday, May 13, at the Baker Hotel, headquarters for the Auxiliary. During the entire meeting open house was held in a reception suite at the Baker Hotel, with the Dallas Auxiliary as hostesses. Favors were presented to all ladies who registered.

Social affairs began Tuesday morning, May 14, at 8 a. m., with a breakfast for the council women and district presidents at the Dallas Athletic Club, with Mrs. Hall Shannon as local hostess. Place cards were linen handkerchiefs embroidered with each individual name. Mrs. S. H. Watson and Mrs. P. R. Denman were joint hostesses and at this time the prize was presented to the council woman who secured the most new organizations in her district, Mrs. R. T. Wilson, of Austin.

The past presidents were entertained at the same time on Tuesday morning with a breakfast at the Baker Hotel, with Mrs. O. M. Marchman as the hostess.

The Executive Board, Nominating Committee, past presidents, district and county presidents were entertained with a luncheon on Tuesday, with Mrs. S. H. Watson, State president, as honoree. This luncheon was held in the ballroom of the Baker Hotel, with Mrs. C. L. Martin as the local hostess and chairman of arrangements. Spring flowers and Mexican pottery decorated the individual tables. Large baskets of colorful gourds decorated the speakers table, and small colored gourds marked the places for the honor guests.

In the afternoon, about 500 members and visitors of the Auxiliary attended the tea held at the Dallas Woman's Club, with Mrs. W. B. Carrell as local hostess, and the chairmen of the local convention committees helping with the arrangements, honoring Mrs. S. H. Watson, State president. Also in the receiving line were members of the Executive Board, past presidents, and the local committee on arrangements. Mrs. L. S. Thompson, president of the Woman's Auxiliary to the Dallas County Medical Society greeted the guests at the door.

The reception preceding the President's Ball was held in the Empire Room, Adolphus Hotel, honoring Dr. L. H. Reeves, president of the State Medical Association. Dr. and Mrs. Van Cookerly, local hostesses, greeted the guests.

The President's Ball following the reception was held in the Crystal Ballroom at the Baker Hotel.

On Wednesday morning, May 15, the general business meeting of the Auxiliary was held at the Baker Hotel, with Mrs. S. H. Watson, president, presiding. The message of welcome was given by Mrs. L. S. Thompson, president of the Dallas County Auxiliary, and the response was made by Mrs. Horace S. Renshaw, president of the Tarrant County Auxiliary. Dr. L. H. Reeves, president of the State Medical Association, addressed the group. Dr. Preston Hunt, president-elect of the State Medical Association, brought greetings. Mrs. Rollo K. Packard, president of the Woman's Auxiliary to the American Medical Association, spoke on the "Functions of an Auxiliary." A business session followed, which included reports of officers, council women, district and county presidents. Following the reports, officers for 1940-1941 were elected and installed by Mrs. Edward Roensch of Bellville, following which Mrs. Watson handed the gavel over to Mrs. Scott C. Applewhite, San Antonio, incoming president.

A luncheon was held at noon honoring all visiting ladies in attendance on the Annual Session, compliments of the State Medical Association. Five hundred and forty-five attended. Following the luncheon, Nieman-Marcus held a style review, featuring the latest summer fashions.

On Wednesday evening, members and guests of the State Medical Association and Auxiliary were entertained at the "Plantation." Music was furnished by Anson Weeks and his orchestra, and a professional floor show completed the entertainment fea-

ture. For this delightful occasion, members and visitors were guests of the Dallas County Medical Society. This function completed the social affairs of another most enjoyable visit in Dallas.

AUXILIARY NEWS

Bowie-Miller Counties Auxiliary met April 26, at "Cross Patch", the home of the president, Mrs. Ralph Cross, Texarkana. Co-hostesses with Mrs. Cross were Mesdames John T. Potter, L. H. Lanier, Perry Priest and R. R. Kirkpatrick.

Committee reports were heard.

Mrs. J. T. Robison announced that a poster made for the Auxiliary by Bill McDuffie, high school student, showing Auxiliary accomplishments for the year, was one of three selected at the Arkansas State Auxiliary meeting in Fort Smith to be forwarded to the American Medical Association Auxiliary meeting in New York in June.

Mrs. N. B. Daniel, chairman of the cancer control committee, stated that all groups in Texarkana were contacted by speakers of the Auxiliary and the public health officer, Dr. Easley, and that the funds procured have been forwarded to the cancer control headquarters for research work. The Auxiliary went on record as being highly appreciative of the generous publicity by the newspapers in connection with this work, and for the time over the radio station.

Mrs. Perry Priest, speaker for the afternoon, gave an instructive paper from *Hygeia*, on the Wagner health bill. At the conclusion of the meeting guests were served an ice course with Mrs. J. E. Tyson, president-elect, at the service.

Cameron-Willacy Counties Auxiliary held a dinner meeting at the Madison Hotel, Harlingen, April 15. Officers elected at the March meeting were installed as follows: President, Mrs. Neal Monger, San Benito; vice-president, Mrs. George L. Gallaher, Harlingen; secretary, Mrs. E. T. Morris, San Benito; and treasurer, Mrs. E. P. Reed, Brownsville.

Mrs. S. H. Watson of Waxahachie, State president, was a special guest at the March meeting and made a talk on the aims of the Auxiliary, stressing the extension of the memorial fund for families of indigent doctors and the student loan fund. Donations were voted to both causes.—Mrs. George L. Gallaher.

Cherokee County Auxiliary was entertained April 23, with a buffet supper by Mrs. L. L. Travis at her home in Jacksonville. The occasion was enjoyed by eighteen members and three guests. After the supper a short business meeting was held at which time President Mrs. Wheeler appointed committees to serve during the ensuing year.—Mrs. Marvin Lamb.

Dallas County Auxiliary met May 2, at the Dallas Country Club.

The Auxiliary voted to hold its luncheons next season at the Dallas Country Club.

Mrs. W. B. Carrell gave a travel talk, after which she presented Mrs. L. S. Thompson, retiring president, as the captain of a mythical ship.

Mrs. Thompson in turn introduced Mrs. Ramsey Moore, incoming president, and presented her with a tiny ship as she turned over the duties of her office. As each new officer was installed she was presented with a symbol of her office as a jingle was said by the retiring officer.

New members were elected as follows: Mesdames B. H. Griffin, J. E. Scales, John Baker, C. W. Thornton, I. A. Estes, C. Frank Brown, and C. C. Nash.

An exhibit of Kay Harrington's collection of foreign dolls was on display.

Mrs. Thompson extended an invitation to members and their husbands to attend a garden party May 10.

The Executive Board of the Auxiliary met preceding the luncheon.

DeWitt-Lavaca Counties Auxiliary observed "Doctor's Day" recently by complimenting their husbands with a chicken barbecue at the Cuero Municipal Club House. At the close of the barbecue Mrs. Marvin Duckworth, president of the Auxiliary, welcomed the guests. Dr. Robert Wagner responded for members of the County Medical Society.

Mrs. S. H. Watson, Waxahachie, State president, was introduced and spoke on "The Purpose of the Medical Auxiliary."

The barbecue and meeting was attended by twenty-one members and guests.—Mrs. R. M. Milner.

Kerr-Kendall-Gillespie-Bandera Counties Auxiliary observed State President Day March 16, with a meeting at the Adolph Stiehler ranch near Kerrville.

Mrs. S. H. Watson, Waxahachie, State president, and Mrs. Scott Applewhite, San Antonio, president-elect, were honor guests.

The following officers were elected for the year 1940-1941: President, Mrs. Victor Keidel; first vice-president, Mrs. J. B. Woodall; second vice-president, Mrs. J. C. Herrick; third vice-president, Mrs. W. A. Minsch; secretary, Mrs. Adah Peden; treasurer, Mrs. W. E. Gregg; parliamentarian, Mrs. S. E. Thompson; historian, Mrs. L. L. Keyser; and publicity chairman, Mrs. H. Y. Swayze.

Mrs. Watson gave an inspiring and encouraging talk of the work accomplished by the Auxiliary and pointed out the desirability of supporting the memorial and student loan funds.

Mrs. Applewhite spoke of plans for the next year's work, urging that Auxiliary members inform themselves of medical legislation so that they may present to the laity intelligent and forceful discussion of any legislation pending affecting the medical profession.

After the meeting husbands of members of the Auxiliary were included among honor guests at a barbecue dinner.—Mrs. Ada Peden.

Jasper-Newton Counties Auxiliary met April 17, at the home of Dr. and Mrs. W. F. McCreight, Kirbyville.

Officers for the ensuing year were elected as follows: Mrs. W. F. McCreight, Kirbyville, president (re-elected); Mrs. A. J. Richardson, Jasper, vice-president; Mrs. W. R. Worthey, Call, recording secretary and treasurer; Mrs. C. S. Damrel, Call, corresponding secretary; Mrs. H. W. Hardy, Jasper, chairman of the Hygeia committee; Mrs. W. R. Kelley, Jasper, chairman of the public relations committee; Miss Edna Shaffer, Jasper, reporter, and Mrs. Worthey Gellatly, chairman of exhibits.

Entertainment features for the program included a piano solo by Wanda McCreight and a reading by Shirley Ann Ralph.—Miss Edna Shaffer.

Tarrant County Auxiliary held its final luncheon meeting of the year May 10, at the Fort Worth Club. Officers were installed as follows: President, Mrs. Joe McVeigh; president-elect, Mrs. C. O. Terrell; first vice-president, Mrs. Edwin Davis; second vice-president, Mrs. Sidney Price; recording secretary, Mrs. E. E. Anthony, Jr.; corresponding secretary, Mrs. Kent V. Kibbie; treasurer, Mrs. Sam Jagoda; publicity secretary, Mrs. A. D. Ladd; parliamentarian, Mrs. W. R. Thompson; and historian, Mrs. Henry Trigg.

Preceding the luncheon, annual reports of retiring officers were heard.

Dr. L. H. Reeves, president of the State Medical Association, and his daughter, Miss Allah Reeves of Fort Worth, were guests.

TRANSACTIONS

TWENTY-SECOND ANNUAL SESSION OF THE WOMAN'S AUXILIARY TO THE STATE MEDICAL ASSOCIATION OF TEXAS

DALLAS, MAY 13, 14, 15 AND 16, 1940

Minutes of the Pre-Convention Meeting of the Executive Board

Tuesday, May 14, 1940

At 12:30 p. m., at the Baker Hotel, a luncheon was given honoring Mrs. S. H. Watson, State President, and Mrs. Rollo K. Packard, President of the Woman's Auxiliary to the American Medical Association. It was attended by members of the State Executive Board, past presidents of the State Auxiliary, the nominating committee and district and county presidents and was a "No-Host" affair.

There were approximately seventy members present, including one past President of the Auxiliary to the A. M. A., three past presidents of the Southern Auxiliary, and fourteen past presidents of the State Auxiliary.

Mrs. S. H. Watson, president, presided at the meeting.

The invocation was given by Mrs. M. L. Graves, of Houston.

The address of welcome by Mrs. J. H. Marshall of Dallas, follows:

Address of Mrs. Marshall

How often do we repeat words without realizing their true meanings. The one which I say to you now, *Welcome*, is an example. In English as well as in the Romance languages, its true significance is, "You have done well to come." It has pleased my fancy to imagine that the very letters themselves spell out even more than the words as a whole.

W—Welcome we bid you
E—Enter our midst
L—Linger among us
C—Carry with you our greetings
O—Open are our arms to receive you
M—May we all meet again
E—Ever remember your visit in Dallas

Welcome, thrice welcome, our visitors.

The response to Mrs. Marshall's address was given by Mrs. C. B. Alexander, president of the Bexar County Medical Auxiliary, as follows:

Address of Mrs. Alexander

It brings a glow of happiness to all our hearts to hear your words of welcome and to be the recipients of so much hospitality. We love to come to Dallas. We like your teeming streets, your impressive skyline, your busy markets. We admire your beautiful homes, your progressive schools, your cultural background. Then, too, we like the magic of our memories; memories that go back to childhood; the Dallas Fair, when all seemed a Fairyland; the Grand Opera, when time stood still; the Centennial, that made us almost burst with pride. To be a visitor in Dallas is always a pleasure; but to be a guest of the Dallas Medical Auxiliary is a very happy privilege, one we have eagerly anticipated.

To be present today at this beautiful Executive Board Luncheon is a source of pride and joy to each of us. For many of us, this is the first time we have had the privilege of meeting with our State Board, and we want to thank you for your warm welcome. We are delighted to find this inner circle such a happy group. Our first contact with you has taught this lesson: it is more important to distribute smiles, to offer a helping hand, and to enjoy life, than it is to correct the minutes, to read the reports, and to change the By-Laws.

May I make our appreciation manifest by proposing a toast to our hostess Auxiliary:

"To the Dallas Auxiliary
Bless her endeavor;
May she prosper and flourish,
Enduring forever."

Mrs. S. H. Watson, president, brought greetings as follows:

Greetings From President Mrs. Watson

Ladies, this Executive Board meeting brings to you, in concrete form, the business transactions of the administration of 1939-1940. In extending greetings to you there is an earnest and sincere message from the depths of my heart, of love and appreciation for the untiring co-operation and helpfulness I have received from you.

The thousands of miles I have traveled and the hundreds of letters that I have written is a small contribution of time and effort, on my part, in exchange for your loyalty, constructive programs and splendid results. When I took office last May, I found many new friends, but after a busy winter of earnest work we are old friends and there is no conflict in friendship. Friendship such as we enjoy is neither a formality nor a mode but rather a life. Not all people come to friendship in the same way but when one has enjoyed the loyalty and support of the Woman's Auxiliary to the State Medical Association, the capacity for friendship increases—there is no surplus in friendship.

It is not egotistical to say that your membership in the Auxiliary is an emblem of quality. We have a definite pride in being a member of the Woman's Auxiliary to the State Medical Association, because it is a symbol of our standing in the community in which we live. When we first learned, in its most rudimentary sense, that in union there is strength, the dawn of civilization began.

Bacon enumerates the three noble fruits of friendship as peace in the affections, support of the judgment, and aid in all actions and occasions. How necessary it is to have peace in the affections; there is nothing more disturbing to one's equilibrium than short words with curt answers. To love and be loved means—even pulse, clear eyes, good digestion and sound sleep—success. The duty of following the leader and trusting the judgment of officers in charge is imperative in order to assure success and we must find the outlined activities agreeable and be helpful. The sweetest and most stable pleasures are never selfish. They are derived from fellowship. Friendship strengthens one's character. With the many difficulties the medical profession is now experiencing, it is important that the members of the Auxiliary face the world together and are ready to stand shoulder to shoulder.

Comradeship is one of the finest facts and one of the strongest forces in life. It is up to the members of the medical Auxiliary to promote and secure the comradeship of the doctors and their families. Some friendships are made by nature, some by contact and

some by a common interest. We have at least a double tie, contact and interest. "So long as we love, we serve," says Robert Louis Stevenson, "and so long as we are loved we are indispensable".

It is the earnest belief of your president that the Auxiliary has played a major part in the sympathetic feeling and understanding that exists now in the medical profession that was an unknown factor in years gone by.

I come now to the last of these adventures in friendship and as I go I take each and every one of you with me to my store house of sweet memories. I wish you might hate to let me go, as I myself hate to go! And if fate decrees that I should remain to be a very, happy old lady, you will know that in my memory lives the joy with which you have filled my very soul.

The year's work, with all of you, has intoned a beautiful symphony for me and in exchange for your refrain of loyalty I will continue to chant, I love you!

Greetings were also brought by Mrs. Scott C. Applewhite, President-Elect, of San Antonio, as follows:

GREETINGS FROM PRESIDENT-ELECT MRS. APPLEWHITE

It is a pleasure to be here today. Time goes by so swiftly it seems only yesterday we were together in San Antonio.

The past few weeks I have been reviewing the records of the Auxiliary from its beginning to the present time, and it makes me very proud to realize how we have grown in membership and expanded in activities.

To the women who have served as our leaders in the past and to Mrs. Watson our leader this year, your loyalty to the organization, your wisdom and vision, in directing our activities will never be forgotten, but will remain always an inspiration to those who follow.

A message of love was received from Mrs. A. C. Scott, Honorary Life President, Temple, who was unable to attend the meeting.

Mrs. John T. Moore, of Houston, then introduced the guests of honor.

Mrs. Walter A. Minsch, of Kerrville, Secretary, then read the minutes of the previous Executive Board meeting held in Dallas in September. The minutes were approved as read.

On motion of Mrs. W. F. Armstrong, of Fort Worth, it was voted to send a telegram with a message of sympathy to Mrs. S. C. Red of Houston, this message to be included in the report of the resolutions committee, and a copy sent to Mrs. Red.

On motion of Mrs. A. B. Pumphrey, of Fort Worth, it was voted that the State Medical Auxiliary offer a prize of $10.00 each year to be given to the Auxiliary having the largest percentage of readers of the Auxiliary Notes of the TEXAS STATE JOURNAL OF MEDICINE.

Mrs. P. R. Denman, Houston, organization chairman, announced the winner of the trophy for the Auxiliary gaining the largest percentage of new members during the year, as follows:

Walker-Madison-Trinity, first place, Mrs. L. E. Bush, Huntsville, president.

Hidalgo-Starr won second place, with Mrs. R. G. Swearingen, president, and Lampasas-Burnett-Llano, third place, with Mrs. T. D. Vaughn, Bertram, president.

Mrs. Denman then presented the winner with a silver miniature wine cooler, requesting that the name of Walker-Madison-Trinity and each successive winner be engraved thereon, and this trophy be then passed on from year to year.

Mrs. Ralph Cross, Texarkana, announced that Bowie-Miller Counties Auxiliary with Mrs. Cross as president, was the winner of the award of $25.00 offered by Dr. Preston Hunt, for the largest percentage of readers of the TEXAS STATE JOURNAL OF MEDICINE.

Mrs. D. F. Kerbow, Paris, *Hygeia* chairman, announced the winner of the *Hygeia* contest, namely: Childress-Collingsworth-Hall, with Mrs. R. E. Clark of Memphis, as president. Mrs. Kerbow also stated that she had received a letter from the editor of *Hygeia*, stating that this Auxiliary had won the national prize offered by the American Medical Association.

Mrs. J. Frank Clark, Abilene, program chairman, announced the winners of the essay contest as follows: First place, Carrizo Springs; second place, San Antonio; third place, Fort worth.

Ten $1.00 prizes were awarded to the following: Abilene, Paris, Whitewright, Lubbock, Lufkin, Cleburne, Wellington, El Campo, Greenville, San Angelo.

The judges included Dr. Preston Hunt, Texarkana, President-Elect of the State Medical Association of Texas; Mrs. J. Frank Clark, Abilene, fourth vice-president of the Woman's Auxiliary, and Mrs. Frank Armstrong, Fort Worth, public relations chairman of the Woman's Auxiliary.

Mrs. L. Barton Leake, of Temple, gave a recapitulation of the treasurer's report.

President Mrs. S. H. Watson appointed the following auditing committee: Mesdames Marvin Duckworth, Cuero; J. W. Tottenham, Brownwood; J. Charles Dickson, Houston.

Mrs. W. H. Page, Houston, chairman, with Mrs. R. B. Homan and Mrs. Rollo Packard, were asked to serve as judges for the exhibits and to announce the winner at the general session.

President Mrs. Watson expressed thanks to the Dallas County Auxiliary for the delightful luncheon arranged by them. The meeting adjourned.

Respectfully submitted,
MRS. WALTER A. MINSCH, Recording Secretary.

MINUTES OF THE OPENING EXERCISES AND FIRST GENERAL MEETING

Dallas, May 15, 1940

The twenty-second annual session of the Woman's Auxiliary to the State Medical Association of Texas convened at 9:30 a. m. in the Mezzanine Lounge of the Baker Hotel, Dallas, May 15, 1940, with the president, Mrs. S. H. Watson, presiding.

The invocation was given by Mrs. Herbert Donnell, Waxahachie.

The address of welcome was given by Mrs. L. S. Thompson, president of the Dallas County Medical Auxiliary, as follows:

ADDRESS OF MRS. THOMPSON

Dallas bids you welcome and extends to you her sincere greetings and best wishes for a pleasant visit. We feel honored to have the privilege of entertaining such a distinguished group of thinking women, women who are real humanitarians and useful assistants to men of a great profession.

Twenty-three years ago the first auxiliary to a county medical society was organized here in Dallas. We have watched with pride its growth and development into state and national organizations.

The purpose of our group was to bring into closer fellowship the families of our doctors and to promote social, philanthropic and educational work. We are pleased with the results and it is to you we give the honor for its success.

As we mingle together in this great gathering, exchanging greetings, may there also be an exchange of good fellowship, the beginning of new friendships and a happy occasion of meeting old friends. Whether you have visited our city before or whether you are here for the first time, it is our desire that you enjoy yourselves and that you take advantage of the many fine and interesting things our city has to offer, among which are beautiful homes and gardens in the residential sections. It is the home of the Texas Centennial grounds where you will find the great and beautiful Hall of State in which is stored many historical items of interest. All true Texans should visit this shrine. Dallas has more than seven thousand acres of parks. Our amusement row is fine and offers many entertaining shows.

We have many attractive and unique eating places downtown and in the outskirts of our city. Our courtesy and information chairmen are prepared to direct you to these places.

You are invited to request from any Dallas hostess anything your hearts desire and it is our sincere wish that you shall have it.

May we at this meeting create among ourselves a feeling of friendship and mutual cooperation, and by this contact with members of the Auxiliary to the State Medical Association, return with a larger vision of life and with the inspiration to do nobler and better things. May we always be the guiding star and inspiration to our ever faithful and loyal husbands, the doctors.

Again, you are welcome. Enjoy yourselves.

Mrs. H. S. Renshaw, Fort Worth, president of the Tarrant County Auxiliary, responded to the address of welcome, as follows:

Address of Mrs. Renshaw

It would be very difficult indeed not to respond to the cordial greeting extended by you, Mrs. Thompson, and members of the Dallas County Auxiliary. You have welcomed us with your generous hospitality and lavished entertainment upon us. We are glad and privileged to be your guests and a part of this twenty-second meeting of the Woman's Auxiliary to the State Medical Association.

On motion of Mrs. J. Frank Clark, Abilene, it was voted to dispense with the reading of the minutes of the previous regular meeting, reference being made to the fact that they had been printed in the Texas State Journal of Medicine.

Telegrams were read from Mrs. V. E. Holcombe, President-elect of the American Medical Association Auxiliary, Mrs. A. C. Scott, Honorary Life President of the State Auxiliary, and Mrs. Henry C. Haden, a past State president.

Mrs. S. H. Watson, president, then presented Dr. L. H. Reeves, Fort Worth, president of the State Medical Association of Texas, who spoke as follows:

Address of Dr. Reeves

It is indeed a pleasure to be here as your guest this morning and bring you greetings and best wishes from the 4,347 doctors comprising the membership of the State Medical Association of Texas.

We are deeply interested in all your worthy and laudable undertakings. You are to be congratulated on the splendid work you are doing in the interest of organized medicine. The potentialities of your organization in rendering real service is today great indeed—I believe greater than ever before.

In my travels over the state the past two years in the interest of organized medicine, I have had an opportunity to observe closely the splendid things you are doing. You have been a great help to the medical profession, and personally you have been an inspiration to me in my work. We are expecting even greater things of you in the future.

There must be the very closest co-operation and understanding between our organizations—more specifically is this true in all matters pertaining to legislative and public health problems.

For some time I have been greatly interested in one of your worthy undertakings. That is your benevolent or Memorial Fund, to be used in rendering aid and comfort to worthy and needy doctors or their families. While the need for this fund may not at this time be great, we all appreciate the fact that such a need does exist and that it will continue to exist as time goes on. The medical profession through its various medical societies, should enthusiastically endorse and support this worthy undertaking—financially and otherwise.

I had planned to discuss with you some of the details of the probable working plan between us, but I find that I cannot very safely do this. At the present time there is much doubt as to the support and direction of the political and legislative activities of the State Medical Association, and it is along these lines that perhaps your greatest opportunity for service lies. As soon as our status as relates to the activities mentioned has been determined, we will be in a position to go into detail with your representatives as to what we propose to do and what you may do to help. My successor, Dr. Hunt, and the central office, will see that you are competently advised.

We are, of course, interested in any and all of your activities, but we appreciate that many of those activities while worthy and of interest to us, are strictly your own concern. Our conception of your organization is that while the purpose of your existence as an organization is to support us as a group, in whatever we do, you are at the same time an autonomous group. Except for the desirability of freedom of action, and if you were simply to do our bidding, we had as well establish you as a department of our own organization.

I wish to thank you for this opportunity to speak to you, and again to express to you my appreciation of your splendid co-operation and support during my term of office.

I further wish for you a splendid meeting in every way, and a full measure of success in your various undertakings.

Dr. Preston Hunt, of Texarkana, President-elect of the State Medical Association of Texas brought greetings.

Mrs. Scott Applewhite, President-elect, then escorted Mrs. Rollo K. Packard, President of the Woman's Auxiliary to the American Medical Association to the speaker's platform, and Mrs. Watson announced that Mrs. Packard's address would be given at the luncheon which would immediately follow the General Session.

Address of Mrs. Packard

After many years in this organization, the most frequent questions that I am asked are:

What are we to do?
What are we organized for?
What can I get out of the Auxiliary?
What are we accomplishing?

To some of the older members and particularly those who have held various offices in their State and National Auxiliary these questions at times seem to be discouraging. I wonder if you have ever had that feeling? Personally, I have not because we are a young organization, and we have grown rapidly during a period of years, characterized by many new problems in our social, economic and political life. Few people, few organizations, few businesses along

with the profession have had smooth sailing during this period, and all have been confronted with new problems for their solution. Our greatest defeats and likewise our greatest triumphs come during such periods. I feel that we have made progress during all of this, and that by constant study of our functions and objectives, and then application of methods and means to perform these functions and reach these objectives we will render the service for which we were and are now organized.

When we meet in a great convention like this we meet for rather a definite purpose, and I should like to quote from a former president of the General Federation of Women's Clubs: "It is a great world-wide gesture, an expression of something intangible, but nevertheless real, a dramatic, definite though doubtless unwieldy, method of expressing a very real and very precious thing. It helps to create that body of enthusiasm of mutual belief in the power of women to get together and act. It helps to make of the nation, even of the world a great community, it crystallizes a vast neighborhood spirit."

Before discussing our functions and objectives I should like to say to those who ask the question, "What can I get out of the Auxiliary?" to change that question and ask, "What can I contribute to the Auxiliary?" I am sure that every member can contribute to the Auxiliary and her contribution will come in proportion to the amount of study and deliberation she gives to the subject. Article II of the Constitution and By-Laws of the National Auxiliary states the objects as follows:

The objects of this Auxiliary shall be: (1) Through its members, to extend the aims of the medical profession to all organizations which look to the advancement of health and education; (2) to assist in the entertainment at all American Medical Association conventions; (3) to promote acquaintanceship among physicians' families that fellowship may increase; (4) to do such work as may be approved from time to time by the American Medical Association.

I will discuss numbers I and IV of these objectives because I think they are of primary importance and I am quite sure that numbers II and III have been, and are being handled exceedingly well. Our greatest problem is one of public relations and health education, and these come largely under the public relations committee and the program committee. Public relations consist largely in acquainting the public with the work and accomplishments of the American Medical Association and the medical profession. Health education consists largely in acquainting the public with the advancement of medical science and the necessity of seeking adequate medical care for the various illnesses and the necessity of continued medical research both in the diagnosis, treatment and prevention of disease, and the part the physicians play in the program with the various health agencies of the country.

I do not believe that we have to present arguments to convince the people that the first essential to good medical care is well trained physicians with a medical and health conscience.

We hear much about adequate medical care for the American people. We might ask a question. What constitutes adequate medical care? Does it consist of just having a doctor available who can make a call or who you can consult? Or does it depend more on the intelligence of the doctor, his diagnostic skill and knowledge of modern methods of diagnosis and his knowledge of modern therapy? It would seem the latter is the only road to adequate medical care. Therefore, it would seem that the public should be interested in medical education and the training of men to practice the various branches of medicine; for the community is going to be best served and most economically served that has the best qualified physicians to render medical care to that community, and so I would like to discuss some of the outstanding accomplishments of the American Medical Association in medical education and training for the practice of medicine.

It would seem obvious to me that the public should be acquainted with these. There are many things that the public does not understand because they have not been informed and if we desire to change their attitude toward the medical profession it must be changed by conveying to them the knowledge regarding the efforts that the American Medical Association makes to protect them in furnishing well trained physicians.

The Standardization of Medical Schools.—About thirty years ago the American Medical Association began an investigation of medical education in this country, and set about to improve this education: first, by setting certain standards for medical schools which they would approve and by raising the requirements for entrance to medical schools. At that time there were about 180 medical schools in the United States, and a large number of them were privately owned and operated largely or solely for profit. The requirements for admission and graduation in these schools, which were operated for profit, were very low. The curriculum was not well organized and not properly supervised. Internships at that time were not required, and nearly every graduate of these schools went out and began the practice of medicine, in many instances with mediocre preparation. Through the efforts of the American Medical Association all of these proprietary medical schools have been put out of business, and there are now seventy-six medical schools approved by the American Medical Association. There are minimum standards of requirements for entrance in these schools and the curriculum is approved by the American Medical Association and also the qualifications of the teachers in these schools must be satisfactory to the Association. Care in the selection of students both from their intellectual and moral background is taken into consideration for entrance. Many of the universities now require an internship in a hospital approved by the American Medical Association and the American College of Surgeons before they will issue a diploma. Some states also require the same before they will allow a graduate to take the State Board examination.

It would seem obvious that from this single piece of work that the American Medical Association accomplished its set of standards for medical education, that guarantees the first requirement of adequate medical care, that is, a well trained physician.

The Standardization of Hospitals and Internship Training.—Just as medical schools were operated without any standardization so were the hospitals. The American Medical Association started on the standardization of hospitals with the thought in mind that they would approve those hospitals that had the proper equipment, personnel and staff to guarantee competent medical care to the community that each hospital serves. Clinical staff meetings and pathological conferences have been organized in all approved hospitals in an effort to offer constant postgraduate instructions, not only to the interns but to the members of the hospital staff; also accurate records of every case are kept that can be reviewed and where symptoms, diagnosis and management can be properly evaluated. Yearly examinations are made of all of the hospitals to determine that they are maintaining proper equipment, personnel, staff, etc., to meet the requirements of the American Medical Association and the American College of Surgeons.

The hospitals failing to meet these requirements are removed from the list of acceptable hospitals.

Postgraduate Education.—As time passed and the advancement in science increased so rapidly bringing about new and more technical specialties, the American Medical Association set about to organize postgraduate courses in hospitals that they approved for the same, in order that physicians might be competently trained in these new fields, and today 518 hospitals are equipped to give special training in the following fields: surgery, obstetrics, gynecology, anesthesiology, cardiology, malignant diseases, fractures, medicine, mental deficiencies, neurosurgery, ophthalmology, pathology, pediatrics, tuberculosis, and many others. Aside from this nearly all of the State Medical Societies have some form of educational program to keep the doctors in their respective states acquainted with the advancement in the diagnosis, treatment and prevention of disease. These programs have been developed over a period of years, to insure better medical care.

Council on Pharmacy and Chemistry.—For years the country was flooded with patent medicines and nostrums of all types. The American people were spending millions of dollars for cures for cancer, tuberculosis, mental diseases, male and female disorders, etc. The American Medical Association set about through its Council on Pharmacy and Chemistry to analyze the products thus advertised to determine the claims made in the diseases they were guaranteed to cure, and to determine the exact contents of the advertised products. Many of these nostrums were advertised through the mail and over the radio. The American Medical Association set out with the aid of the government authorities to stop such fraudulent advertising through the mail, over the radio and in publications, with the result that a large number of these nostrums have been put off the market. Likewise, in the advancement of medicine various commercial houses are constantly producing new drugs. These drugs are not approved by the American Medical Association until they have been thoroughly analyzed and studied in the laboratories at the American Medical Association. Hundreds of such preparations are refused approval each year. They must have merit both in the standardization of the product and proven experimental and clinical value.

Ethics.—There has been much in the public press regarding the ethics of the medical profession and a great many people seem to feel that the standard of ethics set by the American Medical Association is entirely too high, and that much of it is for the protection of the profession, and not the public, and should be discontinued. The American Medical Association is constantly refusing to deviate from this high standard, and one might assume that if all lines of endeavor were governed by such a high standard of ethics that much of our present day troubles would be abolished. I am quite sure that the American public would be actually terrified if the American Medical Association were to announce that they had discarded their standard of ethics, because that standard of ethics is solely for the public good. Today the world might take a lesson—that no standard of ethics is too high.

Legislation.—The American Medical Association has always favored any type of legislation that was directed toward the improvement of public health. They have advocated a Secretary of Health in the cabinet of the President of the United States. They have always cooperated with all governmental agencies in the public health field. The various State Societies have attempted to have medical practice acts placed on the statutes that safeguard the interest of the public. The American Medical Association and the various constituent Societies have fought some types of legislation when they were convinced that that legislation was detrimental to the public health. In no instance have they taken sides in partisan political controversy. They have always attempted to appeal to the intelligence and honesty of the party in power.

Scientific Research.—The advancement in medicine comes by continued scientific and clinical research. In the last fifty years there has probably been more advancement in scientific medicine than in all of the previous history of medicine. The American Medical Association and the American doctor have played a very important role in the continuation of this research by the establishment of the awards to carry on such work where the individual engaged was not able to do so himself.

Reduction of Mortality and Morbidity.—During the last forty years, life expectancy has increased thirty years. Thirty years ago 2.5 per cent of the population was 65 years of age or over, but today 8.5 per cent of the population is 65 years of age or over. During this period infant mortality has been decreased over 50 per cent. Also maternal mortality has shown a marked decrease. Due to the advancement in surgery thousands of handicapped crippled children have been restored to normal individuals and, likewise, thousands of adults with serious injuries have been restored to normal individuals. We might add the reduction in the number of cases of tuberculosis due to the discovery of its cause and modern method of management. The advancement in the diagnosis and treatment of mental disease occupies an outstanding position. Hundreds of what formerly were termed incurable cases are now amenable to treatment by modern methods.

Lay Education.—For many years the American Medical Association and various State Medical Societies have carried on a campaign of lay education, covering various fields of medicine, through radio, lectures, *Hygeia*, and other publications. The American people know about cancer, diabetes, syphilis, heart disease, rheumatism, etc.

In Philadelphia a few years ago they reduced the mortality in acute appendicitis about one-half by a direct lay education program, and other cities and states have carried on campaigns direct to the public to reduce mortality and morbidity.

In addition to all of the above, because of the increased cost of medical care, resulting entirely from modern methods of diagnosis and treatment the American Medical Association has made extensive studies of plans that would make adequate medical care available to all of the people. While some have cried out for revolutionary changes the American Medical Asosciation has steadfastly refused to deviate from standards that would continue to produce the results that have been produced in the last thirty years.

Now most of the physicians and their wives have given considerable thought to these outstanding accomplishments of American medicine, but it seems necessary at this time to carry the message of these accomplishments to the public, if we are to have their cooperation in the preservation of these standards. It, therefore, becomes highly important that the Public Relations Committee and the Program Committee make every effort to carry this type of message to the organizations with which they come in contact. It is not our function simply to denounce those, who, because of lack of information, are at odds with the association or the profession, but rather our function that these people should know the exact facts, and we believe that the great majority of the American people, knowing the exact facts, will not desire any changes in the present program.

In closing, let me say that adequate medical care can be had only when physicians are adequately trained and when the public is educated to the value of such medical care. In the United States we have both, as attested by the Surgeon General's remark that 1938 was our healthiest year.

On motion of Mrs. W. R. Thompson, Fort Worth, it was voted to accept all reports as a whole.*

Report of the President

In giving you a report of the year's work of your president it would be entirely just to call it our report, as the work of my administration represents your coöperation and interest in all outlined activities. The Woman's Auxiliary of the American Medical Association is made up of thirty-eight state auxiliaries well organized and functioning according to the regulations of each State organization. Texas rejoices in sixty-eight county auxiliaries and ten district auxiliaries. In our auxiliaries, 116 counties are represented. There is still much work to be done. It was the privilege of your president to attend the American Medical Auxiliary meeting in St. Louis last May. The reports were inspiring and helpful as was the meeting of the American Medical Auxiliary Executive Board, which I attended in Chicago last November.

In September the Executive Board of the State Medical Auxiliary met with the president. There were thirty-three Executive Board members present and twenty other interested members of the Auxiliary. At this meeting plans for the year's work were set forth and conveyed immediately to all county presidents by the chairmen of the various committees. The president's message followed the adjournment of the Executive Board meeting, urging cooperation with all outlined activities.

A New Year's letter from the president gave words of encouragement and expressed pleasure in the interest being manifested over the state, in Auxiliary work.

Another message from the president went out to all officers and county presidents, early in March, stressing the importance of paying dues and sending in reports. Twenty-five copies of minutes of the Woman's Auxiliary to the American Medical Association meeting held in St. Louis in May, 1939, were mailed to all officers of the State Auxiliary. By request an article was published in the January number of the Texas State Journal of Medicine and also by request one article, from the president, in *The Bulletin of the Woman's Auxiliary to the American Medical Association* appeared in the April issue.

It has been my very great pleasure to visit twenty-eight Auxiliaries in different parts of the state and to attend six District Auxiliary meetings. Aside from the thousands of miles that I have traveled I have written hundreds of letters. I have met every engagement on the appointed time, except one which the hostess town found impossible to fill. My only regret has been my inability to fill conflicting engagements.

I have visited auxiliaries only by invitation. Each visit has been one of interest, charm and beautiful entertainment; such cordiality could be prompted only by sincerity and devotion to purposes of the Woman's Auxiliary to the State Medical Association. I have addressed each Auxiliary visited and I have stressed the importance of building up the three funds being sponsored by the Auxiliary. Much emphasis has been placed on the necessity of increasing the Memorial Fund due to distressing demands made on this fund.

A substantial increase in the three funds appears in the treasurer's report, which evidences a general interest in the work. The untiring work of all standing committee chairmen brings to you a wonderful report. The work has been approved by the Advisory Board to the Woman's Auxiliary. We have found the board willing and helpful on all occasions. From Drs. Reeves, Taylor and Anderson we have received hearty co-operation and I may add an appreciation of the work being done. Your president accepted an invitation from Dr. Reeves to "sit in" on an Executive Council meeting of the State Medical Association.

In accepting the honor you gave me I pledged to you and to myself to give you the best I had to give and I trust I have, in a measure, done for you what you have done for me and what you deserve.

Mrs. S. H. Watson.

Report of President-Elect

There being no duties especially assigned to the president-elect it is hard to make a report, although I am pleased to tell you what I have been doing this past year. In this time I attended two board meetings and the general meetings of the National Auxiliary in St. Louis. I have also been present at three board meetings of the State Auxiliary.

Conferences were held with Dr. Preston Hunt and Dr. Holman Taylor pertaining to Auxiliary work for the coming year. The past few months have been spent in studying the Auxiliary work, appointing committees, and making plans for the coming year's program.

I am deeply indebted to Mrs. Watson and the past presidents who have been most gracious and helpful in assisting me in every way possible.

Respectfully submitted,

Mrs. Scott C. Applewhite.

Report of First Vice-President—Chairman of Organization

The fellowship with the wives of the doctors over our interesting state and the close association with our gracious and capable president, who has so untiringly assisted and encouraged me throughout the year, have made the service of organization chairman one long to be cherished, a red letter day in my memory.

Fellowship is the well-spring from which the Auxiliaries down through the years will draw their sustenance. To fellowship add our theme song for this year, "All Your Strength is in Your Union", and we have the two foundation stones of auxiliary structure, "Fellowship and Unity."

The medical society and the auxiliary must go hand in hand. Herein lies our strength.

The fifteen council women over the State, which comprise the committee on organization, have been most co-operative. We are tried and true friends by correspondence and it is a joy to meet one another as we bring to a close our year's work.

Together we have accomplished the organization of six new county auxiliaries and the re-organization of one district auxiliary and one new district, and we are happy to have added "to golden numbers, golden numbers."

The six county auxiliaries organized are as follows: Liberty-Chambers, Mrs. R. C. Bellamy, Daisetta, president; Anderson-Houston-Leon, Mrs. Paul B. Stokes, Crockett, president; Shelby-San Augustine-Sabine, Mrs. John H. Windham, Shelbyville, president; Bastrop, Mrs. C. Martin Hoch, Smithville, president; Gray-Wheeler, Mrs. W. Calvin Jones, Pampa, president; Caldwell, Mrs. Abner Ross, Jr., Lockhart, president.

District 7 Auxiliary was reorganized with Mrs. J.

*Secretary's Note: Many of the reports have of necessity been abbreviated. The original manuscripts are on file with the Recording Secretary.

W. E. H. Beck, Austin, president, making a total of ten district auxiliaries. The other district auxiliaries are: District 4, Mrs. H. B. Allen, Brownwood, president; Districts 8, 9 and 10 (South Texas), Mrs. J. D. Thompson, Port Arthur, president; District 11, Mrs. C. E. Willingham, Tyler, president; District 12, Mrs. A. C. Hornbeck, Marlin, president; District 13, Mrs. A. L. Borchardt, Vernon, president; District 14, Mrs. H. A. Baker, Wills Point, president; District 15, Mrs. W. S. Caldwell, Kilgore, president.

I attended the board meeting in September where I distributed among the five council women present maps of their districts with organized and unorganized counties marked. I mailed the others to the ten council women who were not present. I also made a complete set of the maps and presented them to our president.

I have written 450 letters, 250 personal, 200 form letters. I have attended four district auxiliary meetings and have traveled more than 3,000 miles. I have sent five telegrams or day letters, made nine long distance telephone calls, visited fourteen medical auxiliaries, have been present at the organization of seven out of the eight new auxiliaries, and also at the reorganization of District 7.

A message on organization was sent to the JOURNAL for the February issue. Reprints were mailed to the district presidents, council women, and presidents of county auxiliaries. Letters and copies of the message were sent to the unorganized counties and the many answers received were appreciated. One or two of our new organizations are direct results of this effort.

Letters were sent to each auxiliary president urging that all wives of doctors in her county be enlisted, and that interest be extended into the adjoining county, if unorganized, letting none miss the golden opportunity for fellowship which an auxiliary affords.

The trophy offered for increased membership on percentage basis was awarded to Walker-Madison-Trinity Auxiliary and the council woman organizing the most new auxiliaries in her district is Mrs. R. T. Wilson, Austin, District 7. Congratulations of the committee and their chairman to both.

My deepest gratitude is here expressed to each auxiliary member, the county presidents, the district presidents, my own committee of council women and our president, Mrs. S. H. Watson, for making this such a happy year of service together.

Respectfully submitted,

MRS. P. R. DENMAN.

SUPPLEMENTARY REPORT OF FIRST VICE-PRESIDENT—CHAIRMAN OF ORGANIZATION

The following percentage gains in Auxiliary membership have been obtained during the past year:

Auxiliary with membership from 1-50:

1. Walker-Madison-Trinity — enrolled 11, new members 8, 72.6 per cent.
2. Hidalgo-Starr—enrolled 11, new members 6, 54.5 per cent.
3. Lampasas-Burnett-Llano—enrolled 15, new members 6, 40 per cent.

Auxiliary with membership over 50:

1. Bexar—enrolled 229, new members 51, 22.2 per cent.
2. Galveston—enrolled 96, new members 14, 14.5 per cent.
3. Tarrant—enrolled 143 new members 20, 13.9 per cent.

Auxiliary with membership 100 per cent:

1. Runnels County, District 4, organized April, 1939, 100 per cent.
2. District 7, organized 100 per cent.

I am indebted to Mrs. Minsch, our Secretary, for assisting me in computing this percentage gain, and I also appreciate the interest the Auxiliary in general has taken to reach this goal. Pleasant competition stimulates growth.

MRS. R. B. DENMAN.

REPORT OF SECOND VICE-PRESIDENT—CHAIRMAN OF PHYSICAL EXAMINATIONS

An earnest effort has been made by the committee this year to keep the women of the Auxiliary health-minded.

In the year 1930, physical examination was made an objective in the program of the Woman's Auxiliary to the State Medical Association. Since then the idea has become more firmly implanted in the minds of the membership through the conscientious leadership of the various ones serving on the committee on physical examination.

Now, the work is not to acquaint the women with the idea but to create a desire to put into active practice the rule already learned. And this rule is the fact that every person—young and old—should be given a thorough physical examination at least once a year.

The subject of physical examinations has been given a definite place on the programs of practically all the groups. Members of the Auxiliary have been called upon for talks on health before many other civic organizations, and have included in their talks the need of health examinations by everyone.

There have been fine reports given on the number of examinations made upon the women of the Auxiliary and various members of their respective families. Over 1,500 physical examinations have been made among members of physicians' families during this term of office. The figures manifest an intense interest in physical examination, and show that there are wide-awake chairmen on the job.

Interesting methods of presenting the subject were presented in the various auxiliaries. Bexar County included in one program a playlet staged by Auxiliary members, which was titled "On Being Clinicked."

Letters were written to the presidents of all auxiliaries organized in the State, and to all chairmen on physical examinations whose names were learned.

An article entitled "Health Examinations in the Doctor's Family" was written for the March issue of the TEXAS STATE JOURNAL OF MEDICINE.

I appreciate the helpful assistance of Mrs. S. H. Watson and others who cooperated to make it possible for this committee to function.

Respectfully submitted,

MRS. Q. B. LEE.

REPORT OF THIRD VICE-PRESIDENT—CHAIRMAN OF HYGEIA

Last year when elected to the office of Hygeia chairman I was delighted. For in helping to *Hygeia*, I felt that I would be helping to fulfill a request by the American Medical Assoication of the Auxiliary. If for no other reason than this request alone, I looked forward to being of service in this work.

On considering the work of the Hygeia Chairmanship more closely, I realized how decidedly the furthering of the sale of this publication is the work of physicians' wives. We are the link between our husbands' profession and the laity; the magazine *Hygeia* is the link between their professional organization and the laity. By reading and discussing the magazine among the laity we help link the aims and the plans of the American Medical Association into their thoughts and lives. Thus, it is the fitting duty of the Auxiliary to sell *Hygeia* and the personal responsibility of each member to read, talk, and sell *Hygeia*.

In October 1939 I mailed letters to county auxiliary presidents in which I urged the sale of *Hygeia* and suggested that each auxiliary enter the National Hygeia Contest. I enclosed in each letter a card to be returned to me with the name and address of the county *Hygeia* chairman. The names of eighteen *Hygeia* chairmen were returned to me and to these I wrote personal letters discussing the problems of each county. In all these letters I especially emphasized that no organization is too small to compete in the National Hygeia Contest. During the year I corresponded with the secretary of the *Hygeia* magazine and our national *Hygeia* chairman. At the end of the year's work I wrote letters again to each county *Hygeia* chairman or Auxiliary president asking answers to questions which would give me a resume of the year's work.

Throughout the state of Texas there were two county auxiliaries that reached or went over their quota of *Hygeia* subscriptions. These were Hunt-Rockwall-Rains and Kaufman Counties Auxiliaries. There was one "honorable mention". This was Bowie-Miller Counties Auxiliary, with Mrs. W. Decker Smith as chairman.

The greatest honor was brought to us by Childress-Collingsworth-Hall Counties Auxiliary, with Mrs. S. H. Townsend as *Hygeia* chairman. This auxiliary won the first prize of $35.00 in the group of auxiliaries with a membership of from one to thirteen. There are eleven members in this organization and they sold forty-four subscriptions! No other county auxiliary in this group over the entire United States qualified! Indeed the Auxiliary to the State Medical Association is proud of Childress-Collingsworth-Hall Counties Auxiliary.

In summing up, there were 492 and three-fourths subscriptions to *Hygeia* sold, which is an increase of a little over 4.5 per cent over last year's 471.5 subscriptions.

With the exception of a few counties there seems to be an increase of interest and enthusiasm. This, I hope, will continue to increase each year for every year brings a greater need for a closer communication between the A. M. A. and the laity of the country. We, ourselves, must be tenacious in seeing that every home in Texas has the opportunity of a closer and authentic communication with the A. M. A.

To all county *Hygeia* chairmen who have given cooperation and to those who brought honor to our state in the national contest, may I express my sincerest thanks.

Respectfully submitted,
Mrs. D. F. Kerbow.

Report of Fourth Vice-President—Program Chairman

As program chairman, I have tried to carry out the aims of the national program committee. Each county auxiliary in Texas has had some sort of health program, but each auxiliary has formulated plans to suit local needs.

I attended the A. M. A. Auxiliary meeting in June and there made plans for a State Essay Contest. This plan was approved by our president, Mrs. S. H. Watson, and by Dr. S. H. Watson and his advisory committee from the State Medical Association of Texas. In the fall, the Executive Board of the Auxiliary voted to establish the contest as an annual one and to give total cash prizes of fifty dollars. Throughout the year, I have centered my activities upon this contest and upon helping new auxiliaries to plan programs carrying out national and state aims.

I have written 240 letters. I have secured and advised all auxiliaries to secure material from the A. M. A. and to use *Hygeia* for reference in the essay contest. Twenty-six auxiliaries entered this contest and since we were unavoidably late getting the contest under way, this response is gratifying. The auxiliaries have almost unanimously planned to sponsor the contest next year. Let me urge its continued support as an excellent means of closely allying the laity and the medical profession.

This year's contest winners are as follows: First, Carrizo Springs; second, San Antonio; third, Fort Worth. Ten one dollar prizes go to the following towns: Abilene, Paris, Whitewright, Lubbock, Lufkin, Cleburne, Wellington, El Campo, Greenville, San Angelo.

Respectfully submitted,
Mrs. J. Frank Clark.

Report of the Recording Secretary

Your recording secretary reports that she has taken the minutes of the Post Executive Board meeting held in San Antonio May 10, 1939, and the minutes of the Executive Board meeting in Dallas, September 21, 1939. These minutes were published in the Texas State Journal of Medicine.

All routine work incident to this office has been carried on throughout the year. To every person responsible for a report in the proceedings of this convention a letter was written bearing a request for its specific preparation and date of submitting, and this report carries with it sincere thanks for the splendid response and cooperation received from every section of the State. My grateful thanks and appreciation to Mrs. S. H. Watson and Mrs. S. F. Harrington for their helpful suggestions throughout the year. It has indeed been a pleasure to serve you in this capacity.

Respectfully submitted,
Mrs. Walter A. Minsch, Recording Secretary.

Report of the Corresponding Secretary

The official stationery for the members of the board was procured. Thirty-eight packages of this stationery were distributed. Fifty-nine letters to the board were mailed in August, and twenty-three agenda were given out at the board meeting.

All requests by the president have been met and responses to communications placed into the proper hands.

The list of county presidents has been prepared for the incoming president.

Mrs. T. G. Estes.

Report of the Publicity Secretary

It is not the happy privilege of each one of us, as it is of our president, to visit each auxiliary in Texas and hear directly what each organization is doing but it is the privilege of each one of us to read of these activities in the Auxiliary Notes and News each month in the Texas State Journal of Medicine. We are indeed fortunate in that the space we use in the Journal is without cost to us as an organization. To those who have taken advantage of this splendid means of telling of their activities and interest goes our appreciation and thanks, and to those who have fallen short, goes our sincerest wish and hope that next year will bring to them an added interest and enthusiasm.

It would be next to impossible for us to be able to say in each yearly report that we had added two or more pages over the previous. It would not be long until the Journal would be printed entirely for the activities of the auxiliaries. For this reason it has been necessary to discontinue the printing of the yearly reports of the county auxiliaries in the June issue and to make the monthly reports and articles as brief as possible without detracting from the real value of the news. Taking all this into consideration we have only twelve less pages in the Journal than last year. Ninety-nine (99) articles were sent to the Journal and published. Thirty-

four (34) auxiliaries have made reports this year as well as six districts. The maximum number of reports made by any one organization was eight and the minimum being one. Eight special articles were published which included a message from your president; a message from the organization chairman, Mrs. P. R. Denman; a request and report from the physical examinations chairman, Mrs. Q. B. Lee; and report of the State and National executive boards as well as a resume of the activities of your president by the publicity secretary. Two articles have been used in the April *Bulletin of the Woman's Auxiliary to the American Medical Association.*

Letters of instructions were sent to each county president, in September, with the request that they be given to the publicity secretary. At this same time I requested that each auxiliary send me one of their year books. The year books help to fill in undated news clippings or incomplete articles that are sometimes sent in for publication. This year twenty-one such articles have been returned to county publicity secretaries because they were either not dated or were incomplete and could not be printed until complete. A copy of each issue of the JOURNAL has been sent to Mrs. James P. Simmonds, National Press and Publicity Chairman, as well as an extra set of clippings from my JOURNAL, which she tells me are requested from time to time by the publicity chairmen or presidents of other states. So our activities may not only be the inspiration for auxiliaries in our own state but in others as well.

Again this year there is a prize of twenty-five dollars offered to the Auxiliary that has the largest percent of its members reading the JOURNAL each month.

It has indeed been a pleasure to serve as your publicity secretary the past three years and I hope you will continue to give your heartiest cooperation to the incoming publicity secretary. The valuable and gracious assistance of Drs. R. B. Anderson and Holman Taylor has added pleasure to this office.

MRS. CALEB O. TERRELL.

TREASURER'S REPORT

As treasurer of the Woman's Auxiliary to the Texas State Medical Association, I wish to make the following report:

Remittance sheets and membership blanks were sent to all county and district presidents. One hundred and forty-one letters were written and a duplicate correspondence file kept. All money received has been acknowledged by a duplicate receipt. All disbursements have been made by check and receipted bills filed. Five hundred and fifty dollars ($550.) in H. O. L. C. Bonds which were deposited in the First National Bank of Temple, were cancelled and this money was returned to the General Fund. One thousand dollars ($1,000.) from the Memorial Fund has been placed in a savings account in the First National Bank in Temple.

Students having loans were notified when interest payments were due and notes were maturing. Four notes, signed by Frank Beall, Margaret Conger, Robert H. Brooks, and Marvin Lamb, were paid in full, and the cancelled notes returned. Application blanks properly filled out and signed, are held as authority for eleven loans to eight students totalling $1250.00. A note for $150.00 signed by B. T. Withers, Jr., not in the file at the time of the audit, has been signed and returned, making the note file complete and up to date. An itemized statement of the Student Loan Fund has been furnished Mrs. Marvin L. Graves, chairman.

From the Memorial Fund, one loan of $250.00 has been made, one gift of $100.00 has been made, and $1000.00 has been placed in a savings account in the First National Bank in Temple, drawing 2 per cent interest. An itemized statement of the Memorial Fund has been furnished Mrs. O. M. Marchman, chairman.

All receipts to the George Plunkett Red Fund have been sent to the South Texas Commercial National Bank of Houston, and a statement from the bank is attached to this report.

The following report has been audited by a certified public accountant as of May 7, 1940, and is respectfully submitted.

MRS. L. B. LEAKE.

REPORT OF THE AUDITING COMMITTEE

The Committee has looked over the books, which we find have been audited by a Certified Public Accountant.

Respectfully submitted,
MRS. J. CHAS. DICKSON, Chairman,
MRS. MARVIN DUCKWORTH,
MRS. J. W. TOTTENHAM.

REPORT OF THE AUDITOR

Temple, Texas
May 11, 1940

Mrs. L. B. Leake, Treasurer
Woman's Auxiliary to Texas Medical Association
Temple, Texas
Dear Mrs. Leake:

At your request I have audited the books of the Woman's Auxiliary to the Texas Medical Association for the period from May 2, 1939, to May 7, 1940. Attached you will find report of this audit.

Should there be any information that you desire in connection with this please do not hesitate to call upon me.

Yours very truly,
GEORGE G. YATES, Certified Public Accountant.

WOMAN'S AUXILIARY TO THE STATE MEDICAL ASSOCIATION OF TEXAS

DUES RECEIVED FROM COUNTY AUXILIARIES DURING PERIOD FROM MAY 2, 1939, TO MAY 7, 1940

Auxiliary	*Amount*
Anderson-Houston-Leon	$ 4.50
Angelina	8.00
Austin	5.00
Baylor-Haskell-Knox	5.00
Bell	21.50
Bexar	140.50
Bowie	7.00
Brazos-Robertson	9.50
Brown-Mills-San Saba	6.00
Burnet	8.50
Cameron-Willacy	10.50
Cherokee	12.00
Cooke	6.00
Dallas	151.00
DeWitt-Lavaca	9.00
District No. 10—Henderson	1.00
Ector-Midland-Martin-Howard-Glasscock-Andrews	11.00
Ellis	9.50
El Paso	45.00
Falls	9.00
Five County	10.00
Fort Bend	4.00
Fourth District	5.00
Galveston	20.50
Gray-Wheeler	9.50
Grayson	14.00
Gregg	12.00
Harris	134.00
Harrison	5.50
Hattie Hunt	6.00
Henderson	6.50
Hidalgo-Starr	8.00
Jasper-Newton	6.00
Jefferson	32.50
Johnson	8.00
Kaufman	8.00
Kerr	13.50
Lamar	13.50
Lampasas-Burnet-Llano	2.00
Liberty-Chambers	4.00
Lubbock-Crosby	15.50
McLennan	27.00
Milam	2.50
Montgomery	7.00

Auxiliary	*Amount*
Nacogdoches	7.50
Nueces	28.00
Potter	16.00
Runnels	6.00
Smith	10.00
Tarrant	72.00
Taylor-Jones	18.00
Thirteenth District	.50
Titus	4.00
Tom Green—Eight County	14.00
Travis	31.00
Tri-County	14.00
Van Zandt	4.50
Walker-Madison	9.50
Washington	14.00
Wharton-Jackson	9.50
Wichita	26.00
Williamson	4.50
TOTAL DUES RECEIVED	$1,143.00

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RECEIPTS TO STUDENT LOAN FUND MAY 2, 1939, TO MAY 7, 1940

Donations from County Auxiliaries

Austin-Waller	$ 1.00	
Bell	19.50	
Bexar	25.00	
Bowie	5.00	
Cameron-Willacy	5.00	
Dallas	100.00	
DeWitt-Lavaca	5.00	
Ellis	5.00	
El Paso	25.00	
Five County	5.00	
Fort Bend	2.50	
Galveston	300.00	
Grayson	2.00	
Gregg	5.00	
Harris	150.00	
Hattie Hunt	6.00	
Hidalgo-Starr	5.00	
Jefferson	25.00	
Kaufman	5.00	
Kerr-Kendall-Gillespie-Bandera	5.00	
Lampasas-Burnet-Llano	1.00	
McLennan	100.00	
Nacogdoches	2.50	
Smith	5.00	
Tarrant	25.00	
Taylor-Jones	5.00	
Travis	30.00	
Washington	10.00	
Wharton-Jackson	4.00	
Wichita	5.00	$ 888.50

Paid on Notes

J. Frank Beall	$214.00	
Robert H. Brooks	100.00	
Mrs. Margaret Conger	30.00	
Vernon A. Dean	11.50	
Ben P. Fleming	100.77	
Dr. Marvin Lamb	22.00	
Dr. Charles Mims	22.72	
Joe V. Moody	2.25	
Joe A. Sheppard	12.42	
J. LeRoy Sims	26.60	
Celso C. Stapp	16.80	
Dr. Sam W. Tinney	21.86	
Dr. James Atchison	5.50	586.42

Interest Paid

E. L. Allamon	$ 7.52	
Dr. James Atchison	4.50	
Woodrow M. Avent	6.00	
J. Frank Beall	8.42	
Dr. W. V. Bessonette	13.00	
Robert H. Brooks	6.50	
J. Weldon Carter	3.08	
Mrs. Mary Conger	.90	
Eldon B. Fine	4.28	
Ben P. Fleming	9.23	
C. B. McCuistion	4.50	
Dr. Charles Mims	2.28	
Joe V. Moody	9.75	
John Leslie Otto	3.14	
W. M. Palm	7.82	
John T. Richards	3.00	
John E. Robel	7.65	
Joe D. Schutz	3.75	
P. G. Secrest	7.50	
Joe A. Shepperd	2.42	
LeRoy Sims	5.30	
Celso C. Stapp	3.20	
R. S. Sutton	6.34	
Dr. Sam W. Tinney	6.14	
Dr. H. G. Wilson	9.12	145.34
TOTAL		$1,620.26

RECEIPTS TO MEMORIAL FUND FROM MAY 2, 1939, TO MAY 7, 1940

Auxiliary	*Amount*
Austin-Waller	$ 1.00
Baylor-Knox-Haskell	2.00
Bell	7.50
Bexar	50.00
Bowie	10.00
Cameron-Willacy	5.00
Colorado-Fayette	7.25
Dallas	355.50
DeWitt-Lavaca	5.00
Ellis	8.35
El Paso	25.00
Five County	1.00
Fort Bend	2.50
Galveston	10.00
Gregg	5.00
Harris	25.00
Harrison	5.00
Hattie Hunt	1.00
Hunt-Rockwall-Raines	10.00
Jasper Newton	2.00
Jefferson	10.00
Kaufman	5.00
Kerr-Kendal-Gillespie-Bandera	10.00
Lamar	5.00
Lampasas-Burnett-Llano	1.00
McLennan	10.00
Potter	3.00
Runnels	1.00
Smith	5.00
Tarrant	18.36
Thirteenth District	5.00
Titus	1.00
Tom Green	13.01
Travis	30.00
Tri-County	5.00
Van Zandt	2.00
Wharton-Jackson	2.00
	$ 664.47
Interest	
C. B. McCuistion	9.00
TOTAL	$ 673.47

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RECEIPTS TO GEORGE P. RED FUND DURING PERIOD FROM MAY 2, 1939, TO MAY 7, 1940

Auxiliary	*Amount*
Bexar	$ 25.00
DeWitt-Lavaca	5.00
Gregg	5.00
Harris	150.00
Tarrant	50.00
TOTAL	$ 235.00

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EXPENDITURES FROM GENERAL FUND FROM MAY 2, 1939, TO MAY 7, 1940

Clegg Printing—History Book	$ 6.50
Taylor-Jones Auxiliary—Exhibit Prize	5.00
McLennan Auxiliary—Exhibit Prize	5.00
Mrs. S. H. Watson—President's Expense	350.00
Mrs. H. Leslie Moore—President's Expense	12.00
Mrs. W. J. Johnson—Exhibit Expense	19.50
Mary Alice Bodine—Typing	9.50
Jewell Berry—Auditing	50.00
Mrs. L. B. Leake—Postage and Supplies	14.49
American Printing Company—Supplies	7.70
Mrs. J. B. Johnson—4th Vice President's Expense	15.00
Mrs. S. F. Harrington—Secretary's Expense	11.54
Geo. Boyless—Stationery and Printing	54.05
Mrs. E. E. Fisher—National Dues	571.00
Mrs. Frank Armstrong—Public Relations Chairman	10.00
Prize First Essay	25.00
Prize Second Essay	10.00
Prize Third Essay	5.00
Prizes Fourth Essays	10.00
Mrs. Walter Minsch—Recording Secretary	10.70
TOTAL	$1,201.98

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EXPENDITURES FROM STUDENT LOAN FUND MAY 2, 1939, TO MAY 7, 1940

R. C. Soto	$ 150.00
J. T. Withers, Jr. (B. T.)	150.00
Henry Poetter	100.00
Woodrow M. Avent	100.00
C. R. Pickle	100.00
James Loveless	100.00
T. H. Foley	100.00
James E. Loveless	100.00
Woodrow M. Avent	100.00
E. P. Tottenham	100.00
B. T. Withers, Jr.	150.00
TOTAL	$1,250.00

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EXPENDITURES FROM GEORGE PLUNKET RED FUND FROM MAY 2, 1939, TO MAY 7, 1940

Transfer to South Texas Commercial National Bank	$ 235.00

EXPENDITURES FROM MEMORIAL FUND
MAY 2, 1939, TO MAY 7, 1940

Note	$ 250.00
Gift	100.00
Transfer to Savings Account	1,000.00
TOTAL	$1,350.00

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RECAPITULATION OF CASH RECEIPTS AND DISBURSEMENTS DURING PERIOD FROM MAY 2, 1939, TO MAY 7, 1940

Total Cash on Hand May 7, 1940		$2,738.40
Balance Dues and General Fund	$ 939.08	
Balance Student Loan Fund	1,173.85	
Balance Memorial Fund	625.47	
TOTAL	$2,738.40	$2,738.40

* * * * *

Dues and General

Cash on Hand May 2, 1939		$ 416.05
Collections on Dues	$1,143.00	
Bond Called and Cashed	550.00	
Interest on Bond	7.01	
Prize Donation—Dr. Preston Hunt	25.00	1,725.01
		$2,141.06
Less Expenses Listed Previously		1,201.98
BALANCE MAY 7, 1940		$ 939.08

Student Loan Fund

Cash on Hand May 2, 1939		$ 803.59
Collections County Auxiliaries	$ 888.50	
Collections on Notes	586.42	
Interest Collected	145.34	1,620.26
		$2,423.85
Less Expenditures Listed Previously		1,250.00
BALANCE MAY 7, 1940		$1,173.85

Memorial Fund

Cash on Hand May 2, 1939		$1,302.00
Collections County Auxiliaries	$ 664.47	
Interest on McCuistion Note	9.00	673.47
		$1,975.47
Less Expenses Listed Previously		1,350.00
BALANCE MAY 7, 1940		$ 625.47

George P. Red Fund

Balance on Hand May 2, 1939		$ .00
Collections County Auxiliaries		235.00
		$ 235.00
Commercial National Bank, Houston		235.00
BALANCE MAY 7, 1940		$ .00

Total Cash on Hand May 7, 1940	$2,738.40	
Savings Account—First Natl. Bk., Temple	1,000.00	
	$3,738.40	

NOTES

Notes on Hand May 2, 1939		$7,547.44
New Loans Made During Year	$1,500.00*	
Renewal Notes—Interest Included	490.16	1,990.16
		$9,537.60
Payments Received on Notes	$ 586.42	
Notes Renewed During Year	450.00	1,036.42
NOTES ON HAND MAY 7, 1940		$8,501.18

*New Loans Made During Year

Student Loan Fund	$1,250.00
Memorial Fund	250.00
	$1,500.00

NOTES ON HAND MAY 7, 1940†

Forty-two Notes on hand, with a total value	$8,501.18

AUDITOR'S CERTIFICATE

I, George G. Yates, do hereby certify that I have audited the books of the Woman's Auxiliary to the Texas Medical Association, as furnished me by Mrs. L. B. Leake, Temple, Texas, for the period from May 2, 1939, to May 7, 1940, and, to the best of my knowledge and belief, the statements contained in this report are true and correct.

GEORGE G. YATES.

SEAL

†RECORDING SECRETARY: This item has been condensed for publication. The names of individuals against whom notes are held are on record with proper officials of the Auxiliary.

REPORT OF PARLIAMENTARIAN

The parliamentarian attended the Executive Board meeting in September, 1939, in Dallas; the pre-Convention Executive Board meeting, May 14, 1940, in Dallas, and the General Meeting, Wednesday, May 15, 1940, in Dallas.

MRS. H. E. ROENSCH.

REPORT OF THE LEGISLATIVE COMMITTEE

This year there has been little to do other than encourage our members to work with their respective medical societies. Soon the picture will be entirely different with new legislative members being elected and bills passed.

The medical profession has been called on to protect its rights and to maintain its ideals and the Auxiliary, as a component part of the medical profession, must do its part. We must find out through our medical societies whom and what we must vote for in the coming election. Also we must vote and talk and act with conviction and dignity for our principles.

There is a most important bill before Congress which we must follow step by step and be cognizant of each change that is made as it makes its rounds of the powers in Washington. In our state we must vote intelligently and as one. Last year a chiropractor was elected to our Legislature who really caused trouble to our profession. Organized medicine is confronted with the battle of the century, with the health of the nation as the stake. Let us be up and doing. Let us be informed and act for a successful ending.

MRS. A. B. PUMPHREY, Chairman.

REPORT OF HISTORIAN

Complying with a request from the national historian, I have written seventy-five letters, to county presidents, officers, past-officers, and charter members, seeking important historical material.

This information has been condensed to give a resume of the outstanding activities and achievements of the Woman's Auxiliary to the State Medical Association of Texas since its origin, May 13, 1918. One copy of this will be retained for the state archives and one copy is to be sent to the National Historian.

Significant newspaper clippings, accounts of meetings, excerpts from the TEXAS STATE JOURNAL OF MEDICINE and current history of the State Auxiliary have been placed in the State Historian's book.

It has been a genuine pleasure to serve in this capacity, and I am indeed grateful for the cooperation accorded me.

Respectfully submitted,

MRS. T. M. JARMON.

REPORT OF MEMORIAL FUND

The financial report of the Memorial Fund has been given by the treasurer. In the few minutes allotted to me I shall make some comparisons and read part of a letter in the attempt to secure more and larger donations.

The gifts for the year, up to May amounted to $654.47, more than half of which was given by one county auxiliary, including memorials. The contributions were very small, only two counties gave more than $25.00, whereas in 1938 four counties gave more than $100.00. But the number of auxiliaries contributing this year was most gratifying. In 1938 only nine auxiliaries contributed, in 1939 there were eighteen and this year there have been thirty-eight. This shows that the interest is growing. One small auxiliary sent a check for $25.00 and wrote, "We wish it could be more, for in our opinion the Memorial Fund is the most worthy project of the State Auxiliary." As many as twelve others voiced the same sentiment. I do believe if more of us

would stop and consider what this fund means, who it is intended for, and why, that it would take on much greater proportions.

Last year when I read my report I asked that you increase your donations, that you show your love for others by giving, and thus comfort the bereaved and help the living to live. What more can I say now? How well do I remember at our last meeting a lady who sat midway back just a little to my left. She is well known to most of you. She has been devoted to the Auxiliary ever since its organization and has rendered much service. Before many months I received a letter from her. I shall not mention her name nor would I refer to our correspondence except for the hope it may find in your hearts a responsive chord which will bear fruit in a memorial.

Quoting from the letter, "This is going to be a very hard letter to write but I must ask the State Auxiliary to give me $100.00 to pay my board bill. I have lost all my property through foreclosures and I am making plans to enter the Eastern Star Home. I have tried so hard to carry on but it seems impossible. After a long happy life of ease and friendships I am leaving it for an entirely different existence. There will be restrictions of course but I shall try to meet whatever comes with courage and faith in God that I shall find peace and happiness there for the years I have still to live. I have no children to grieve for me but it will tear my heart to give up all my interests and my Auxiliary work."

We gladly sent the $100.00. In her letter of thanks and gratitude to you she writes, "Your friendly understanding did much to heal the hurt in my heart and I shall try to make a place for myself in the new surroundings and perhaps there will also be contentment and a degree of happiness."

Women of the State Auxiliary, do not forget her. She may be sitting by you today, she may be you or me tomorrow. Isn't that a challenge to us to make a more worthy contribution to such a beautifully helpful cause?

A loan of $250.00 was made to another doctor's widow who will be able to repay it when his estate is settled. $1,000.00 was set aside as a permanent fund. Of the present balance of $615.47 we plan to add at least $200.00 more to the savings account. The interest from this permanent fund will be used as a love gift.

Your committee has made every effort by letters, talks and conversation to create and stimulate interest. Thank you for cooperation.

Respectfully submitted,
MRS. O. M. MARCHMAN.

REPORT OF THE STUDENT LOAN FUND CHAIRMAN

Having served for several years as chairman of your loan funds, and for ten years chairman of your State Student Loan Fund—this work has occupied a prominent part in my busy life, and each year it has grown all the more interesting.

Again your State president has presented these funds in such a forceful way, it has not been necessary for me to remind you of their needs.

While chairman of only one fund, my interest extends to all three and you have been faithful in sending in amounts small and large as you were able to do without urging. Permit me in behalf of my committee to thank you for your ready response in behalf of the students benefiting thereby. May your loyalty and interest continue.

Sincerely,
MRS. MARVIN LEE GRAVES.

REPORT OF THE GEORGE PLUNKETT RED FUND CHAIRMAN

The Committee for the George Plunkett Red State Student Loan Fund takes pleasure in reporting the work of aiding medical students made possible by you.

This Student Loan Fund is handled by the Trust Department of the South Texas Commercial National Bank and has made loans of $200.00 each to two students during this current year, 1939-1940. The fund is known as the George Plunkett Red State Student Loan Fund, being named in honor of Mrs. S. C. Red of Houston, because of the labor of love she gave the State Medical Auxiliary in writing a history of early medicine which she named, "The Medicine Man in Texas". Mrs. Red spent almost two years gathering data and publishing the book. The funds derived from the sale of this history made possible the trust fund which was established January 28, 1933, the initial amount of which was $600.00. During the seven years the fund has aided fourteen students, and the book value is now $2,749.56. Loans are made to students attaining the Junior or Senior year in medical school, and 3 per cent interest is charged.

Several gifts have been received and all students have diligently paid their interest. We wish to express our appreciation for these gifts, also for the earnest effort on the part of the students to keep their payments made promptly. These two factors keep the fund living and growing and make possible helping others. We hope that interest will continue and all will aid in this splendid work; small gifts as well as large are acceptable. Only a few more copies of "The Medicine Man in Texas" are available, therefore, we could not mail them out in quantities as we have done previously, as you sent in your gifts, but single copies are available. Copies of the book may be secured by writing to Mrs. S. C. Red, 817 Caroline Street, Houston, Texas, or the chairman. As practically all funds are handled by the Trust Department of the Bank, the financial report given by them should be studied.

Respectfully submitted,
MRS. CARLOS R. HAMILTON, Chairman, Houston,
MRS. LESLIE MOORE, Dallas,
MRS. J. B. JOHNSON, Galveston.

Houston, Texas, May 13, 1940

South Texas Commercial National Bank, as Trustee for
GEORGE PLUNKETT RED STUDENT LOAN FUND

Statement of Receipts and Disbursements from January 24, 1940, to May 11, 1940. Please examine and report any exceptions at your earliest convenience.

Date 1940	Description	INCOME Disbursements	INCOME Receipts	PRINCIPAL Disbursements	PRINCIPAL Receipts
Jan. 24	Statement rendered		$18.63		
Feb. 20	Interest on note Eldon B. Fine		14.00		
29	Deposit by Mrs. P. R. Denman				5.00
Mar. 15	Deposit by Mrs. P. R. Denman				7.00
	Deposit by Mrs. S. C. Red				3.00
20	From South Texas Medical Assn.				14.70
April 1	Deposit by Mrs. P. R. Denman				285.00
3	Deposit by Mrs. P. R. Denman				80.00
5	Deposit by Mrs. P. R. Denman				15.00
12	Deposit by Mrs. P. R. Denman				26.00
15	Interest on note W. V. Bessonnette		10.00		
	Payment on note W. V. Bessonnette				10.00
May 1	Deposit by Mrs. S. C. Red				3.00
	Deposit in savings a/c	$32.73		$448.70	
2	Deposit by Mrs. P. R. Denman				2.00
	Deposit by Woman's Aux. to Tex. State Med. Assn.				235.00
	To savings a/c			237.00	
		$32.73	$32.73	$685.70	$685.70

Recapitulation

Book value of trust statement rendered 1-24-40	$2,749.56
Income collected period 1-24-40 5-11-40	14.10
Additional deposits to trust a/c	675.70
Book value of trust May 11, 1940, detail attached	$3,439.36

TRUST ASSETS*

South Texas Commercial National Bank, as Trustee for
GEORGE PLUNKETT RED STUDENT LOAN FUND
Houston, Texas, May 11, 1940

Twelve Notes, at 3 per cent, par value and book value	$2,339.94
Savings Account—South Texas Commercial National Bank No. 29681	1,099.42
Book Value of Trust Assets 5-11-1940	$3,439.36

*Recording Secretary: For the purpose of publication, this part of the report has been condensed. The complete report is on record with proper officials of the Auxiliary.

Report of the Reference Committee

By way of a report from my committee, I am sorry to say there has been no reference work this year. I appreciate the honor of having served on the State Executive Board, and have enjoyed the association very much. I regret not having been of more use.

Sincerely,
Mrs. Andrew B. Small, Chairman.

Report of Archives Committee

The eighth annual report of the Archives Committee is necessarily brief.

The minutes of the 1939 meeting at San Antonio were filled with the filing of the June, Journal, 1939.

The historian's book turned in by Mrs. T. C. Terrell covering the dual administrations of Mrs. R. B. Homan and Mrs. W. R. Thompson for 1936-1937-1938 is on the historian's book shelf.

RECOMMENDATIONS

1. That all county presidents continue to feature a brief history of their organizations in county year books, giving the time and place of organization, names of first officers, and charter members of the organization for preservation.
2. Year books to be sent to the archives chairman, if possible.
3. County scrap books to be continued—an award to be given to the county presenting the most complete scrap book for 1940 on exhibition in May, 1941. New organizations will have a decided advantage in this exhibit.
4. That each and every county organization will appoint a county chairman on "Biographies of early Texas doctors," prior to 1911.
5. That these typewritten manuscripts be filed in the archives, looking forward to Volume 2 of "The Medical Man in Texas."

Respectfully submitted,
Mrs. W. A. Wood, Chairman, Waco,
Mrs. John T. Moore, Houston,
Mrs. H. R. Dudgeon, Waco,
Mrs. Henry Trigg, Fort Worth,
Mrs. Tom Snow, Abilene,
Mrs. H. Stiles, Lubbock.

Report of Exhibit Chairman

As chairman of exhibits, I have tried to stimulate interest, throughout the State, in educational exhibits showing the various phases of work done in the Auxiliaries. Early in the year, letters were sent to each president, asking her to send in the name of her exhibit chairman and requesting her to appoint one immediately if she had not already done so. The response to this first letter was gratifying and many personal letters, asking for further information, were received.

Another letter, with suggestions about the size and content of the exhibits, was sent in March to the exhibit chairman and it now seems that the display will be worth while. These displays will be exhibited on the Mezzanine Floor of the Baker Hotel and all Auxiliary members are cordially urged to study them so that they may learn what the other organizations are doing.

Respectfully submitted,
Mrs. E. M. Dunstan.

Supplementary Report of Exhibit Chairman

Nineteen exhibits were on display, and the judges, including Mrs. W. H. Page, Houston; Mrs. R. B. Homan, El Paso; and Mrs. T. D. Vaughn, Bertram, chose Bexar County Auxiliary as the winner.

Respectfully submitted,
Mrs. E. M. Dunstan.

Report of Chairman of Texas Research to Southern Medical Association

As chairman of Texas Research to Southern Medical Association Auxiliary, I have written to each county president, to friends in the different Auxiliaries, and to the council women asking them to send me any papers of particular interest they might have to file with the archives committee.

I am not pleased with the quantity I have to report, but I am very pleased with the quality of the two papers I received. "Outstanding Women in Medicine" was compiled by a doctor's wife, Mrs. Paul H. Power, of Waco, and required much research work. It names 196 women in the United States, giving a brief biography of each.

Dr. J. J. Faust, radiologist of Tyler, Texas, wrote a paper on "Cancer" and read it to the Smith County Medical Auxiliary. It is in the form of questions and answers and is very interesting and instructive.

I appreciate the cooperation I have received and I pledge my support to my successor.

Respectfully submitted,
Mrs. C. E. Southern.

Report of the State Memorial Committee

In the fall letters were written to all county presidents and district presidents and to the members of the committee, asking them to send names of their deceased members. This procedure was repeated in April.

We are pleased with the cooperation received, and we want to thank Mrs. Watson for her assistance throughout the year.

We wrote the families of each of the deceased, inviting them to the Memorial Service to be held at the Adolphus Hotel, at 6:00 p. m., May 14, 1940.

We are glad that we have the names of only fourteen (14) deceased members to report. Their names are listed in the Transactions of the State Medical Association in this number of the Journal.

Mrs. S. F. Harrington, Chairman,
Mrs. T. R. Bassett,
Mrs. G. T. Vinyard.

Report of the Public Relations Chairman

The main objective of the public relations committees, national, state and local, for 1939-1940 has been the better education of the public on public health matters, especially socialized medicine. This purpose has been accomplished by the publicizing of national and local radio broadcasts on health; the promotion of medical speakers bureaus; the dissemination of literature on health education and medical economics, which included sample copies of *Hygeia;* the maintenance of clipping files of newspapers and magazine articles on all questions pertaining to the medical profession; active cooperation with the lay organizations in the interest of health education; cancer education; May Day health programs; and

educational programs on national health measures, such as the Wagner Health Bill.

Public relations teas were given to which leaders of civic, social, political and educational organizations were asked to listen to an informed speaker, usually a doctor, on the subject of "Socialized Medicine."

In one city alone, 25,000 copies of the leaflet "Priceless Heritage," published by the National Physicians' Committee on the Extension of the Medical Service, were distributed. "Socialized Medicine" was debated 2,000 times; 1,500 Health Hints, 1,000 in English and 500 in Spanish were distributed; 500 lecture folders giving topics for lay presentation were mailed out to social and educational groups, and 107 lectures arranged as a result.

The State Chairman of Public Relations sent out 250 personal letters to various organized counties, each county receiving at least three letters during the year; and some counties personal replies to questions or plans regarding the work.

Respectfully submitted,
MRS. W. FRANK ARMSTRONG.

BUDGET COMMITTEE REPORT

Amount in Treasury, May, 1939	$ 416.05	
Amount expected from dues	1,078.00	
Amount from H. O. L. C. Bonds	15.00	
Total		$1,509.05
Amount allowed for national dues	$ 539.00	
Amount for president and corresponding secretary	400.00	
Amount for first vice-president	25.00	
Amount for printing and stationery	65.00	
Total		$1,029.00
Balance		$480.05

Signed:
MRS. H. LESLIE MOORE, Chairman,
MRS. F. F. KIRBY,
MRS. L. B. LEAKE.

REPORT OF FIRST DISTRICT COUNCIL WOMAN

District One has three medical societies and one auxiliary. In considering this report, it must be remembered, that although our area is large, embracing eleven counties, distances are great and population is sparse.

The medical society composed of Ward, Reeves, Winkler, Loving, Hudspeth, and Culberson counties has twelve active members. Unsuccessful efforts have been made to organize an auxiliary for this society through the Pecos group.

Recently, the Big Bend Medical Society has been organized, composed of Pecos, Presidio, Jeff Davis and Brewster counties. It has an active membership of fifteen. The same handicaps are encountered in this group, namely, distance and lack of membership material.

The Auxiliary to the El Paso County Medical Society has an active membership of ninety-eight and an honorary membership of twenty-nine composed of the wives of doctors stationed at William Beaumont General Hospital and Fort Bliss.

Respectfully submitted,
MRS. GEORGE TURNER.

REPORT OF SECOND DISTRICT COUNCIL WOMAN

I regret to report that there are no new organizations in this district but all organized auxiliaries are very active and doing good work. Plans are now under way for the re-organization of the District Auxiliary in the autumn.

Due to illness, I have not been able to visit all the auxiliaries but have corresponded frequently with them and found great interest and cooperation throughout the district.

Respectfully submitted,
MRS. L. F. JOHNSON.

REPORT OF THIRD DISTRICT COUNCIL WOMAN

Because of the widely scattered location of the counties of West Texas in the third district, it was impossible for me to contact women from many of the counties. I spoke and corresponded with several regarding organizations, but this year it did not seem advisable to proceed with efforts to organize.

Our local unit entertained the Panhandle District Medical Society and Auxiliary in Lubbock in October, and this gave us all new contacts among the doctors' wives. I went to the Panhandle meeting in Amarillo in April and again met new members whom I hope to see in Lubbock again in October, 1940, when the doctors' group meets.

I organized one new group in Pampa. Officers were elected and definite plans made for future meetings when the Gray-Wheeler County doctors meet. Dues were collected that day so that they would be on all 1940 records. This group is composed of very young women and should succeed.

MRS. J. HOOPER STILES.

REPORT OF FOURTH DISTRICT COUNCIL WOMAN

The fourth district consists of twenty counties and three Auxiliaries, in which twelve counties are represented, and fifteen members at large, five of which are new members.

I presided at the Fourth District Auxiliary meeting in Brady on October 18, 1939, at which time Mrs. H. B. Allen, Brownwood, was elected president; Mrs. James S. Anderson, Brady, first vice-president; Mrs. F. Bailey, Ballinger, second vice-president; Mrs. Oran H. Chandler, Ballinger, recording and corresponding secretary; Mrs. R. H. Cochran, Coleman, treasurer; Mrs. R. M. Finks, San Angelo, publicity secretary, and Mrs. E. D. Lovelady, Santa Anna, parliamentarian. The next meeting is to be held in Ballinger.

I attended a luncheon given by the Tom Green Eight County Auxiliary honoring our State president, Mrs. S. H. Watson. This is an annual affair honoring the State president of the Auxiliary.

I have attended all meetings, excepting one, due to illness, of my own local auxiliary and have assisted whenever and however necessary. I have also urged the counties that do not have an Auxiliary to organize one.

Respectfully submitted,
MRS. J. H. SMITH.

REPORT OF FIFTH DISTRICT COUNCIL WOMAN

In the year 1939-1940, we were successful in getting members from two other counties where there are no Auxiliaries organized to join our Auxiliary in San Antonio. One member was from Wilson County, Mrs. J. W. Oxford, Floresville, and the other, Mrs. S. E. Morris, San Benito, DeWitt County.

I notified all members at large of all of the meetings and social activities of the Woman's Auxiliary to the Bexar County Medical Society, and they were very active in the organization all during the year.

I had arranged through Mrs. J. W. Oxford, Floresville, to have a meeting of the Wilson County women and try to organize them into an Auxiliary but due to Mrs. Oxford's serious illness at about that time, the meeting did not take place.

MRS. R. A. PARTAIN, JR.

Report of Seventh District Council Woman

In February, the Travis County Medical Auxiliary gave a luncheon honoring our president, Mrs. S. H. Watson, and Mrs. P. R. Denman, our first vice-president. One hundred cards and letters were sent out inviting every doctor's wife in district seven to attend. We had a large number of replies but few in attendance.

Mrs. Denman organized District Seven Auxiliary at this meeting. Mrs. J. W. E. H. Beck, of Austin, was elected president.

On March 5, 1939, we organized an Auxiliary in Bastrop County. The meeting was held at the home of Mrs. Charles M. Hoch, Smithville, and Mrs. J. D. Stephens was elected president.

In April, 1939, Caldwell County Auxiliary was organized with Mrs. Abner A. Ross, Jr., of Lockhart, as the president.

Our aim had been three such organizations. We are happy to report these two, together with the organization of the district, all of which was accomplished through Mrs. Denman's excellent aid.

I have enjoyed knowing the ladies better and meeting new friends.

Respectfully submitted,
Mrs. R. T. Wilson.

Report of Eighth District Council Woman

The eighth district of the State Medical Association consists of ten counties, with three lively Auxiliaries, namely: Colorado-Fayette, DeWitt-Lavaca, Wharton-Jackson. There are still four counties left to be organized.

I did my best to organize an auxiliary in Victoria County and in Matagorda County, as I felt these were the most logical locations, hoping to combine with them Goliad and Calhoun Counties. I had a very courteous reply from Mrs. Story, in Victoria, who said she did not believe an organization was possible just yet, as the women seemed disinterested. In Matagorda County, I could not even get a reply to my letters. I wrote Mrs. Giddings, of El Campo, for assistance and she offered help, but I was unable to make any further contacts.

I was unable to attend the district meeting and also the Executive Board Meeting, in Dallas, because of illness.

I wish my successor "better luck" and offer her my assistance.

Respectfully submitted,
Mrs. Harry H. Brown, Jr.

Report of Ninth District Council Woman

In district nine there are seven organized and active auxiliaries. There are thirty-two doctors' wives in the four organized counties. Of these eleven are in Polk-San Jacinto Counties. A letter was written to each of these women urging them to organize. This was followed by a personal visit to Livingston. After conferences with several of the women and with Dr. T. L. Gardner, president of the Polk-San Jacinto Counties Medical Society, it was deemed impossible to organize an auxiliary this year.

Membership in Brazoria, Burleson and Grimes counties seems too small to effect organization. However, each of these counties was invited by letter to establish an auxiliary. The response was negative. Then a letter was written to each of these women inviting them to become affiliated members with the nearest County Auxiliary. The response was gratifying. This plan gives the women fellowship in the auxiliary and gives the small county auxiliaries the numerical strength they need.

Walker-Madison counties have included Trinity county, and Austin county has included Waller county.

Seventy-seven letters have been written, one district meeting and one district board meeting attended and four of the county auxiliaries visited.

This work has given the council woman a closer contact with many women in the district and state and has been worth while and enjoyable.

Respectfully submitted,
Mrs. Mark H. Latimer.

Report of Tenth District Council Woman

The tenth district is composed of fourteen counties. There are nine medical societies and seven auxiliaries in these counties. There were two new auxiliaries organized during my year as council woman.

An auxiliary was organized to the Liberty-Chambers Counties Medical Society on November 17, 1939, with Mrs. R. C. Bellamy, Daisetta, president; Mrs. J. M. Hubert, Cleveland, vice-president; Mrs. A. N. Lewis, Liberty, secretary-treasurer. The Auxiliary to the Shelby-San Augustine-Sabine Counties Medical Society was organized on February 23, 1940, with Mrs. John H. Windham, Shelbyville, president, and Mrs. L. S. Oates, Center, secretary-treasurer.

Either personal contact was made or letters were written to doctors' wives in Orange, Tyler and Hardin Counties, which are not organized to date. I am sorry to report I found very little interest manifested in the counties. This lack of interest I feel sure is due to the fact the societies are small and the distance too great between towns to make attendance possible.

As council woman, I have had splendid help from our first vice-president, Mrs. P. R. Denman, of Houston.

Respectfully submitted,
Mrs. Richard E. Barr.

Report of Eleventh District Council Woman

I attended the meeting of the Executive Board in September, 1939. I submitted a report of matters of interest to the Smith County Auxiliary, October 3, 1939.

I wrote four letters, sent two telegrams, and made one long distance telephone call relative to the organization of an Auxiliary for Anderson, Houston, and Leon Counties. I made a trip to Crockett, January 21, 1940, and assisted Mrs. Denman and Mrs. Red of Houston, in the organization of these counties, which now have nine charter members, with the following towns represented: Crockett, Lovelady, Oakwoods, Grapeland, Teague, and Centerville.

I wrote four letters and made two telephone calls in an attempt to interest doctors' wives in Palestine in the new Auxiliary, but with no success.

I assisted the Auxiliary to the Smith County Medical Society in the entertainment of all Auxiliary members at a meeting in Tyler, April 4, 1940, honoring Mrs. S. H. Watson, State president, and other distinguished guests. I wrote personal letters of invitation to the presidents of all district auxiliaries. I was co-hostess at a dinner party on Wednesday evening, April 3, at Willowbrook Country Club, Tyler, honoring Dr. and Mrs. Watson.

Respectfully submitted,
Mrs. C. E. Willingham, Tyler.

Report of District Twelve Council Woman

The twelfth district of the Woman's Auxiliary to the State Medical Association of Texas is sorry to report that there were no new auxiliaries formed. Ten letters have been written, with one answer. The women felt that there were already too many organizations.

I do hope that my successor may meet with more success in the fall.

Respectfully submitted,
Mrs. D. D. Warren.

Report of Thirteenth District Council Woman

As council woman I regret to report no new auxiliaries in District Thirteen. The small towns of the district prefer to depend on being members of the district organization. We have had two very successful and well attended meetings with good programs. I shall not duplicate the fine report of our district president by going into detail regarding these meetings. I have assisted the president in every way I could, have attended all meetings and have mailed the usual many letters insisting on membership in the Auxiliary and attendance of all Auxiliary meetings. We are glad to report that the district contributed $5.00 to each the Memorial Fund and the Student Loan Fund. Most of this was raised by a "White Elephant" sale at our last luncheon on April 9, 1940, in Fort Worth.

Respectfully submitted,
Mrs. W. S. Parks.

Report of Fourteenth District Council Woman

The fourteenth district is composed of fourteen medical societies, one district auxiliary and eight county auxiliaries.

The Fourteenth District Auxiliary meeting was in Dallas in November, at the Dallas Athletic Club. Mrs. L. S. Thompson, president of the Dallas Auxiliary, arranged the luncheon. Mrs. D. F. Kerbow, Paris, district president, presided. Minutes of the last meeting were read and approved. The nominating committee made its report, following which the following were elected: president, Mrs. H. A. Baker, Wills Point; secretary-treasurer, Mrs. G. F. Evans, Denton.

Mrs. Kerbow introduced the luncheon speaker, Dr. A. L. Ridings of Sherman, president of the North Texas District Medical Society.

The meeting was enjoyable and the attendance good.

I have visited a number of auxiliaries over the district. Mrs. Watson, our State president, has been with me at these meetings. Everywhere we have found the women interested in the Auxiliary work. The year's work has been pleasant and I have enjoyed the contact with the members of the various auxiliaries. I am grateful for the coöperation given me.

Respectfully,
Mrs. A. L. Thomas, Ennis.

OTHER PROCEEDINGS

Mrs. James T. Montgomery, chairman, then gave the report of the Credentials and Registration Committee as follows:

Report of Credentials and Registration Committee

Past County Presidents	101
Present County Presidents	22
Incoming County Presidents	18
State Auxiliary Officers	10
Council Women	7
Chairmen	13
Past National Presidents	2
Past Southern Presidents	4
Past State Presidents	15
Present National Presidents	1
Present Southern Presidents	0
Present State Presidents	1
Visiting Members	376
Local Members	201
Non-Members	67
Total	644

Respectfully submitted,
Mrs. J. T. Montgomery.

Report of the Resolutions Committee

Be It Resolved, that the Woman's Auxiliary to the State Medical Association of Texas thank our president, Mrs. S. H. Watson, and her co-workers for the untiring service, loyalty and devotion to our Auxiliary.

That we thank the Texas State Journal of Medicine for the space allotted to us and its kind consideration of material submitted by us, and the doctors for their unselfish help and advice at all times.

That we express our deepest gratitude to the president, Mrs. L. S. Thompson, and the members of the Dallas County Medical Society and Auxiliary for the unexcelled manner in which we have been entertained at this meeting, and

That we also thank and express appreciation to our National president, Mrs. Rollo K. Packard, of Chicago, for her visit to us and interest in our effort, and,

That we tender our sincerest sympathy to members of the State Association and Auxiliary who have suffered bereavement during this past year and especial consolation and love to Mrs. S. C. Red, our beloved and valued co-worker, who lost her husband. In the passing of Dr. Red we lost not only a great man and physician but a true friend. His splendid work and noble ideals which helped to make our organization will live long after him. The life and influence of Dr. Red belong not to the past but to eternity.

That in these trying times we earnestly endeavor to follow the noble examples set for us by the founders and leaders of our organization that we may be of greater service to our Creator and our fellow man.

Respectfully submitted,
Mrs. A. E. Moon, Chairman,
Mrs. R. K. Harlan.

On motion of Mrs. A. L. Thomas of Ennis, it was voted to adopt the resolutions offered.

The secretary read the report from the Revisions Committee, which was presented as a recommendation from the Executive Board.

Report of the Revisions Committee

The Revisions Committee recommends the following changes in our By-Laws and Standing Rules:

BY-LAWS

(1) We recommend that Article 2, Section 2, be amended by eliminating second paragraph which reads, "Any member of the Auxiliary shall have the privilege of sending names of eligible members as her choice of officers, to the nominating committee, to be elected at the annual meeting."

(2) We recommend that Article 2, Section 5, be amended by adding "unless prevented by a legitimate excuse—recognized by the nominating committee."

(3) We recommend that Article 3, Section 3, be amended by eliminating sentences which read, "The first vice-president shall act as chairman of organization. The other vice-presidents shall act as chairmen of committees appointed by the president."—reading "The first vice-president, in the absence of the president, shall perform all the duties of that office and upon the resignation or removal of the president, shall become president and hold office until the next annual meeting."

STANDING RULES

(Page 13—Vice-Presidents)

We recommend the elimination of "Vital Statistics and Health Education" and the insertion of "Program"—reading "Fourth Vice-President, Chairman of Program."

(Page 16—Beneficiaries of Funds)

Mrs. O. M. Marchman, Chairman of the Memorial Fund, recommended that the wording in the Standing Rules regarding "Beneficiaries of Funds" be changed to read "The beneficiaries of the Memorial Fund shall be members of families of doctors in good standing of the State Medical Association of Texas at the time of their death."

Respectfully submitted,
Mrs. C. H. Brooks, Waco,
Mrs. B. F. Chambers, Port Arthur,
Mrs. W. J. Johnson, San Antonio.

On motion of Mrs. W. R. Thompson, Fort Worth, it was voted to accept the recommendations of the Revisions Committee.

The President appointed Mesdames E. C. Ferguson, Beaumont, W. R. Thompson, Fort Worth, and Mrs. J. Lawrence Clark, Ennis, a committee to approve the minutes of this meeting.

Mrs. F. F. Kirby, Chairman of the Nominating Committee, reported as follows:

Report of the Nominating Committee

President, Mrs. S. C. Applewhite, San Antonio; president-elect, Mrs. S. F. Harrington, Dallas; first vice-president, Mrs. William Hibbitts, Texarkana; second vice-president, Mrs. A. E. Moon, Temple; third vice-president, Mrs. A. B. Pumphrey, Fort Worth; fourth vice-president, Mrs. Joe B. Foster, Houston; recording secretary, Mrs. Walter A. Minsch, Kerrville; publicity secretary, Mrs. W. F. Armstrong, Fort Worth; treasurer, Mrs. J. Frank Clark, Abilene; parliamentarian, Mrs. J. W. Tottenham, Brownwood; corresponding secretary, Mrs. E. W. Coyle, San Antonio.

Respectfully submitted,
Mrs. F. F. Kirby, Waco, Chairman,
Mrs. G. V. Brindley, Temple,
Mrs. O. M. Marchman, Dallas,
Mrs. S. E. Thompson, Kerrville,
Mrs. T. M. Jarmon, Tyler,
Mrs. L. B. Holland, Wichita Falls,
Mrs. W. M. Barron, San Antonio.

There being no nominations from the floor, Mrs. H. Leslie Moore moved that the secretary be instructed to cast the unanimous vote for the officers as presented by the nominating committee. The motion carried. Mrs. S. H. Watson declared the election.

Installation of Officers

The officers of the Woman's Auxiliary to the State Medical Association of Texas were then installed by Mrs. H. Edward Roensch, Bellville, who spoke as follows:

Address of Mrs. Roensch

I should like to acknowledge the privilege which has been accorded me in permitting me to install the officers of such a worthy auxiliary as this, the Women's Auxiliary to the State Medical Association of our proud State of Texas.

I should like also to direct the thanks of the auxiliary to the retiring officers who have served so faithfully through this last year. We commend you for your loyal work in guiding the destiny of this auxiliary. You have "acted well your part" and therein you deserve all the thanks which it is possible for this association to give.

Members of the Auxiliary, you have indicated your faith and trust in the officers which you have selected to carry on the work during the coming year. I believe I speak for everyone present when I pledge to them our loyal and wholehearted support and coöperation in the fulfillment of their duties.

It is now my pleasure to introduce to you your officers for the coming year.

To our new officers: In accepting this trust you have accepted at once a privilege and a challenge. Yours is a responsibility of planning the program of service and fellowship which will determine to a large extent the accomplishments and success of the Auxiliary. Our organization was brought into being to extend the aims, and the purposes of the medical profession through the wives of the doctors, to other organizations which look to the advancement of health and education; to assist in entertainment at state, district, and local society meetings; to promote acquaintanceship among doctors' families, that local unity and harmony may be increased. As competent ladies you will put forth your best effort to meet that challenge—a challenge to serve the auxiliary and the medical profession in their service to humanity.

Mrs. Applewhite, in conferring upon you the honor of the presidency, your associates express their faith in your ability as an executive and in your devotion to the work of the Auxiliary. May this opportunity for service bring to you the joy which is found in working with others for a common cause.

I now turn the slate over to your president, Mrs. Watson, who will declare you regularly installed in your respective offices for the coming year. You have our very best wishes in making this year an outstanding success.

Mrs. S. H. Watson presented Mrs. Scott C. Applewhite with the gavel, with the following remarks:

Presentation Speech

Mrs. Applewhite, it gives me great pleasure to hand over this gavel to you. It is a loving symbol of the order of business carried on by this great body of women who are wives of devoted physicians. When the Woman's Auxiliary to the State Medical Association of Texas honored you, they in turn honored the Auxiliary by giving us a president who is fine and big in spirit and loyal and devoted to the organiaztion which you represent.

Mrs. Scott C. Applewhite accepted the office of president with the following remarks:

Address of Mrs. Applewhite, Incoming President

Today my feelings are mixed. I am sure you will realize that my first feeling is one of pardonable pride that you should do me the honor to elect me to this office—the highest office that you can confer upon an Auxiliary member in this state.

My second feeling is one of deep humility that you have placed me where I am to follow in the footsteps of that rare and outstanding group of women who have held this office.

I am going to make you a pledge, and that is that I will give to you myself, this year in every way possible and endeavor to fulfill my duties to the best of my ability. I hope and I do ask of you, that you will give to me and the other members of your Board that help that only you can give to make our work continue its growth, thus taking one more step in the path of life.

Mrs. Applewhite then announced the meeting of the Executive Board for Thursday, May 16, Mezzanine Lounge, Baker Hotel. She urged all members to attend, and also invited district and county presidents to attend as guests of the Board.

Mrs. Watson thanked Mrs. L. S. Thompson, General Convention Chairman, the various other chairmen of committees, and the Dallas County Medical Auxiliary for the entertainment planned, the beautiful flowers in all guests of honor rooms, and the many courtesies shown the visiting ladies during the convention.

There being no further business, Mrs. S. H. Watson declared the twenty-second Annual Session of

the Woman's Auxiliary to the State Medical Association of Texas adjourned *sine die.*

MRS. WALTER A. MINSCH, Recording Secretary.

MINUTES OF THE POST EXECUTIVE BOARD MEETING

The Executive Board meeting of the Woman's Auxiliary to the State Medical Association was held on the Mezzanine Floor of the Baker Hotel, Dallas, May 16, 1940, at 9:30 a. m., with Mrs. Scott C. Applewhite, President, presiding.

Mrs. Applewhite read the list of the chairmen of the standing committees as follows:

Legislation—Mrs. H. S. Renshaw, Fort Worth.

Memorial Fund—Mrs. L. S. Thompson, Dallas; Mrs. J. O. McReynolds, Dallas; Mrs. F. F. Kirby, Waco; Mrs. R. B. Homan, El Paso.

Special Advisory—Mrs. J. O. McReynolds, Dallas; Mrs. W. R. Thompson, Fort Worth; Mrs. Frank N. Haggard, San Antonio.

Historian—Mrs. C. H. Reese, Waco.

Student Loan Fund—Mrs. M. L. Graves, Houston; Mrs. John T. Moore, Houston; Mrs. L. B. Leake, Temple.

George Plunkett Red Scholarship Fund—Mrs. P. R. Denman, Houston; Mrs. D. F. Kerbow, Paris; Mrs. W. C. Barnard, Corpus Christi.

Revisions—Mrs. W. J. Johnson, San Antonio; Mrs. B. F. Chambers, Port Arthur; Mrs. S. M. Hill, Dallas.

Resolutions—Mrs. C. E. Southern, Burton; Mrs. L. F. Johnson, Abilene; Mrs. A. L. Thomas, Ennis.

Reference—Mrs. John W. Burns, Cuero; Mrs. S. E. Thompson, Kerrville; Mrs. J. H. Marshall, Dallas.

Archives—Mrs. W. A. Wood, Waco; Mrs. H. R. Dudgeon, Waco; Mrs. John T. Moore, Houston; Mrs. E. H. Cary, Dallas; Mrs. Henry Trigg, Fort Worth.

Texas Research to S. M. A.—Mrs. G. V. Brindley, Temple.

Budget—Mrs. O. M. Marchman, Dallas; Mrs. S. H. Watson, Waxahachie; Mrs. J. Frank Clark, Abilene.

Memorial Service—Mrs. E. C. Ferguson, Beaumont; Mrs. W. H. Sory, Jacksonville; Mrs. R. T. Wilson, Austin.

Exhibit—Mrs. T. H. Thomason, Fort Worth; Mrs. H. R. Dudgeon, Jr., Waco; Mrs. Q. B. Lee, Wichita Falls.

Convention Chairman—Mrs. C. O. Terrell, Fort Worth.

Mrs. Applewhite then read the list of appointed council women for the fifteen districts, as follows:

District 1—Mrs. Ralph Homan, El Paso.
District 2—Mrs. J. M. Hogan, Big Spring.
District 3—Mrs. E. W. Moss, Wellington.
District 4—Mrs. Charles Bailey, Ballinger.
District 5—Mrs. Wm. L. Secor, Kerrville.
District 6—Mrs. Phil Bleakney, Harlingen.
District 7—Mrs. T. D. Vaughn, Bertram.
District 8—Mrs. Harvey Renger, Hallettsville.
District 9—Mrs. J. B. Johnson, Galveston.
District 10—Mrs. W. F. McCreight, Kirbyville.
District 11—Mrs. J. K. Webster, Athens.
District 12—Mrs. Evelyn Rice Hutchins, Marlin.
District 13—Mrs. A. L. Borchardt, Vernon.
District 14—Mrs. Wm. Thomas, Terrell.
District 15—Mrs. R. C. Moore, Jr., Mt. Pleasant.

Before beginning the business session Mrs. Applewhite introduced Mrs. S. F. Harrington, President-elect, who spoke briefly. Other officers and council women were then introduced by Mrs. Wm. Hibbitts, First Vice-President.

Delegates to the Woman's Auxiliary of the American Medical Association meeting in New York, June 10-14, were nominated, as follows: Mrs. Scott C. Applewhite, San Antonio; Mrs. S. F. Harrington, Dallas; Mrs. S. H. Watson, Waxahachie; Mrs. H. Leslie Moore, Dallas; Mrs. H. R. Dudgeon, Waco.

On motion of Mrs. A. B. Pumphrey, Fort Worth, the nominees were elected. Mrs. Applewhite then announced that Texas was entitled to twenty delegates and twenty alternates.

On motion of Mrs. W. R. Thompson, Fort Worth, it was voted to allow Mrs. Applewhite to appoint other delegates to fill the quota.

Nominating Committee.—On motion of Mrs. J. W. Tottenham, Brownwood, Mrs. S. H. Watson was elected Chairman of the Nominating Committee, and the following were nominated to complete the committee: Mesdames W. F. Armstrong, Fort Worth; John T. Moore, Houston; J. H. Marshall, Dallas; J. H. Wooters, Houston; C. H. Brooks, Waco; C. B. Alexander, San Antonio. Nominations were closed and the nominees named elected.

On motion of Mrs. S. H. Watson it was voted to send a telegram to Mrs. V. E. Holcombe, incoming President of the Woman's Auxiliary to the American Medical Association, expressing our pride and good wishes for her success. Mrs. Holcombe was a former resident of the State of Texas.

Mrs. Applewhite then opened the meeting for a discussion of the year's work by the various officers.

On motion of Mrs. Wm. Hibbitts, it was voted to use the topic "INCREASING THE SPAN OF LIFE" as the subject for the Essay Contest for this year.

Mrs. Applewhite then announced that, according to our Constitution and By-Laws, she is allowed one appointment to the George Plunkett Red Scholarship Fund, and the other member of the committee to be elected by the Executive Board.

Mrs. W. C. Barnard, Corpus Christi, was elected to complete the committee for the George Plunkett Red Scholarship Fund.

Mrs. H. R. Dudgeon read a message from Mrs. W. A. Wood, Archives Chairman, requesting that the Archives Committee be allowed expense money to bring the "Table of Past Presidents, Recording and Corresponding Secretaries, and the Treasurers" up-to-date, including 1940. Mrs. Wood also requested 1,000 copies to be printed to be mailed to various members of the State Auxiliary. On motion of Mrs. W. R. Thompson it was voted to leave this matter in the hands of the Budget Committee.

On motion of Mrs. Wm. Hibbitts, Chairman of Organization, it was voted to request Dr. R. B. Anderson to list the letter "A" beside the name of each doctor listed in the June JOURNAL whose wife is a member of the Woman's Auxiliary. Mrs. Hibbitts explained that this listing might stimulate increased interest in membership in the Woman's Auxiliary.

Mrs. Applewhite then extended an invitation to the Executive Board to meet in San Antonio, July 24, 1940, to perfect plans for the coming year's work.

There were approximately thirty in attendance at the Executive Board meeting.

There being no further business the Post Executive Board meeting of the twenty-second annual session of the Woman's Auxiliary to the State Medical Association of Texas, adjourned *sine die.*

Respectfully submitted,

MRS. WALTER A. MINSCH, Recording Secretary.

MEMBERSHIP

Woman's Auxiliary to the State Medical Association of Texas

MAY, 1940

The membership list which follows is compiled from names sent to the State Treasurer, by county auxiliaries, as this year's paid-up members.

The Councilor Districts of the Auxiliary are the same as those of the State Medical Association. By referring to page 190 of this number of the JOURNAL, which carries the list of Councilor Districts of the Association and the counties they contain, it may be ascertained in which Councilor District any particular county belongs.

The names of those members who registered at the Annual Session are indicated by an asterisk.

FIRST OR EL PASO DISTRICT

Mrs. Ralph Homan
2907 Silver, El Paso
Council Woman

EL PASO COUNTY AUXILIARY†

Armistead, Mrs. S. D., 4301 Trowbridge.
Awe, Mrs. Chester, 4430 Trowbridge.
Barrett, Mrs. F. O., 2733 Gold.
*Bennett, Mrs. J. Travis, 2611 Altura Blvd.
Black, Mrs. A. P., 2735 Federal.
*Breck, Mrs. Louis W., 1800 Elm.
Britton, Mrs. Bloyce, Club Road.
Britton, Mrs. W. W., 3800 Cambridge.
Brown, Mrs. C. P., 2900 Federal.
Brunner, Mrs. George, 1114 Galloway.
Butler, Mrs. A. H., 136 Tobin Place.
*Cathcart, Mrs. J. W., 1515 Hardaway.
Causey, Mrs. G. E., 1009 Park Rd.
Caylor, Mrs. C. H., Ruidoso, New Mexico.
Craige, Mrs. Branch, 517 Corto.
Cummins, Mrs. E. J., 4011 Pershing Drive.
Curtis, Mrs. Wickliffe R., 1161 Park Road.
Davis, Mrs. J. W., 1305 Madeline.
Deady, Mrs. Howard P., Country Club District.
Duncan, Mrs. A. E., 2018 North Kansas.
Dunn, Mrs. George M., Sierra Blanca, Texas.
*Dutton, Mrs. L. O., 4400 Oxford.
Egbert, Mrs. Orville, 3000 Federal.
Epstein, Mrs. I. M., 3431 Savannah.
Gaddy, Mrs. S. J., 1500 North Stanton.
Gallagher, Mrs. Paul, 1145 E. California.
Gambrell, Mrs. J. Hal., 4501 Pershing Drive.
Garrett, Mrs. Frank D., 4500 Hastings.
Gorman, Mrs. Jas. J., 3100 Federal.
Green, Mrs. J. Leighton, 2701 Louisville.
Hardy, Mrs. John A., 2911 Grant.
Hendricks, Mrs. C. M., 3601 McKinley.
Holt, Mrs. Russell, 2735 Wheeling.
Homan, Mrs. Ralph H., 2907 Silver.
*Homan, Mrs. R. B., Sr., 1837 Grandview.
*Homan, Mrs. R. B., Jr., 2725 Silver.
Hughes, Mrs. R. P., 1706 Arizona.
Jamieson, Mrs. W. R., 2816 Copper.
Jordon, Mrs. Gerald H., 700 Prospect.
Jumper, Mrs. C. E., 1511 North Virginia.
Keller, Mrs. N. H., 700 Cincinnati.
Kinard, Mrs. Harvey, Hotel Cortez.
Laws, Mrs. Jas. W. (Pres.), Hendricks & Laws Sanatorium.
Leigh, Mrs. Harry, 2619 Altura Blvd.
Liddell, Mrs. T. C., 2731 Richmond.
Long, Mrs. A. D., 2827 Louisiana.
Lynch, Mrs. K. D., 235 Pennsylvania.
Mason, Mrs. C. H., 4430 Oxford.
McCamant, Mrs. T. J., 4500 Trowbridge.
McChesney, Mrs. Paul Ely, 401 Robinson Blvd.
McLain, Mrs. J. N., Fabens, Texas.
Miller, Mrs. Felix, 5 Cumberland Circle.
Molloy, Mrs. M. S., Ysleta, Texas.
Multhauf, Mrs. A. W., 935 Rim Road.
Murphy, Mrs. J. L., 1315 E. Rio Grande.
*Outlaw, Mrs. P. R., 101 E. Nevada.
Peticolas, Mrs. J. D., 2621 Grant.
Ramey, Mrs. R. L., 1110 Montana.
Rawlings, Mrs. J. A., 3027 Wheeling.
Rawlings, Mrs. J. Mott, 3027 Wheeling.
Rennick, Mrs. Samuel, Hotel Cortez.
Rigney, Mrs. Paul, 4600 Raynolds Blvd.
Rogde, Mrs. Jacob (Sec.), Collingsworth Addition.
Rogers, Mrs. E. B., 1601 E. Rio Grande.
Rogers, Mrs. H. Earl, 2518 Richmond.
Rogers, Mrs. Will P., 901 Montana.
Safford, Mrs. Henry T., Sr., 3131 Aurora.
Safford, Mrs. Henry T., Jr., 4771 Cumberland Circle.
Schuster, Mrs. Franklin P., 939 Rim Road.
Schuster, Mrs. M. P., 621 N. Santa Fe.
Shannon, Mrs. Hugh, 1307 Cincinnati.
Smith, Mrs. Leslie, Vista del Monte.
Snidow, Mrs. Francis A., 3009 Altura Blvd.
Spearman, Mrs. M. P., 1124 Baltimore.
Staten, Mrs. Burleson, 916 Blanchard.
Stevens, Mrs. B. F., 217 Blacker.
Stevenson, Mrs. H. E., 620 N. Oregon.
Stevenson, Mrs. Walter H., 504 Hague.
Stowe, Mrs. J. L., 1104 Cincinnati.
Swope, Mrs. S. D., 1309 E. Rio Grande.
Tappan, Mrs. John W., 1546 Upson.
Terrell, Mrs. Scurry L., 2600 Richmond.
Thompson, Mrs. Robt. F., 1227 Rim Road.
Turner, Mrs. George, 3009 Silver.
Vance, Mrs. James, 1717 N. Mesa.
Vandevere, Mrs. W. Ewing, 1919 N. Stanton.
Varner, Mrs. H. H., 3030 Wheeling.
Von Almen, Mrs. S. G., Upper Valley.
White, Mrs. Hugh S., 905 Magoffin.
Worsham, Mrs. B. M., 1325 Montana.

†Address is El Paso unless otherwise stated.

SECOND OR BIG SPRING DISTRICT

Mrs. J. M. Hogan
Big Spring
Council Woman

DAWSON-LYNN-TERRY-GAINES-YOAKUM COUNTIES AUXILIARY

Bennett, Mrs. John B., Lamesa.
Bradford, Mrs. A. L., Seagraves.
*Brummage, Mrs. Wm. S., Brownfield.
Daniell, Mrs. A. H., Brownfield.
Davidson, Mrs. H. L., Seagraves.
Davis, Mrs. Earl C., Brownfield.
Davis, Mrs. Julian W., O'Donnell.
*Dunn, Mrs. Wm. H. (Pres.), Lamesa.
Jacobson, Mrs. Merlin E., Brownfield.
Loveless, Mrs. James C., Lamesa.
Loveless, Mrs. Wells C. (Sec.), Lamesa.
Price, Mrs. Noble H., Lamesa.
Prohl, Mrs. Emil, Tahoka.
Richards, Mrs. Lawrence D., Seminole.
Scroggie, Mrs. Val, Seminole.
Smith, Mrs. Alfred H., Lamesa.
Standifer, Mrs. T. E., Seagraves.
Thompson, Mrs. Chase, Tahoka.
Treadway, Mrs. Thomas L., Brownfield.
Turner, Mrs. John R., Brownfield.

ECTOR-MIDLAND-MARTIN-HOWARD-GLASSCOCK-ANDREWS COUNTIES AUXILIARY

Absher, Mrs. L. Alton (Sec.), Midland.
*Barganier, Mrs. J. H., Odessa.
Bennett, Mrs. M. H., Big Spring.
Bobo, Mrs. Tom C. (Pres.), Midland.
Bynum, Mrs. J. E., Big Spring.
Chapple, Mrs. J. H., Midland.
Cowper, Mrs. R. B. G., Big Spring.
Hall, Mrs. G. T., Big Spring.
Headlee, Mrs. E. V., Odessa.
Hestand, Mrs. H. E., Odessa.
*Hogan, Mrs. J. E., Big Spring.
Johnson, Mrs. Homer, Midland.
Leggett, Mrs. L. W., Midland.
Malone, Mrs. P. W., Big Spring.
McMahan, Mrs. George, Big Spring.
Ryan, Mrs. W. E., Midland.
Sanders, Mrs. Preston R., Big Spring.
Thornton, Mrs. E. K., Odessa.
True, Mrs. G. S., Big Spring.
Van Gieson, Mrs. Verd, Big Spring.
Whitehouse, Mrs. W. G., Midland.
Wood, Mrs. G. T., Big Spring.

TAYLOR-JONES COUNTIES AUXILIARY†

Adamson, Mrs. W. B.
Alexander, Mrs. J. M.
Bailey, Mrs. S. W.
Barnett, Mrs. W. H.
*Bass, Mrs. T. B.
Clark, Mrs. J. Frank.
Cooper, Mrs. Stewart.
Crow, Mrs. Jack (Sec.), 1809 S. 14th St.
Daly, Mrs. Joseph.
Estes, Mrs. Jack (Pres.), 1633 Butternut.
*Estes, Mrs. Sol B.
Gibson, Mrs. J. P.
Gill, Mrs. J. M. F.
Grubbs, Mrs. L. F
Hedrick, Mrs. T. Wade.
Hodges, Mrs. Frank C.
Hollis, Mrs. L. W., Jr.
Hollis, Mrs. Scott W.
Johnson, Mrs. L. F.
Latham, Mrs. J. B.
Leggett, Mrs. C. B.
Little, Mrs. O. W.
Mathews, Mrs. W. J.
*McDonald, Mrs. Donald H.
McFadden, Mrs. C. A.
Middleton, Mrs. E. R.
Middleton, Mrs. Edwin E.
Patillo, Mrs. Guy.
Pickard, Mrs. L. J.
Pritchard, Mrs. C. L.
Ramsey, Mrs. Wayne V.
Seale, Mrs. Hubert.
Sellers, Mrs. Earle D.
Snow, Mrs. W. R.
Tull, Mrs. Raymond H.
Whiting, Mrs. E. T.

THIRD OR PANHANDLE DISTRICT

Mrs. E. W. Moss
Wellington
Council Woman

CHILDRESS-COLLINGSWORTH-HALL COUNTIES AUXILIARY

Clark, Mrs. R. E., Memphis.
Goodall, Mrs. O. R., Memphis.
*Harper, Mrs. Jno. W., Wellington.
Hyder, Mrs. D. C., Donna.
Jernigan, Mrs. E. H. (Pres.), Childress.
Jeter, Mrs. P. R., Childress.
Jones, Mrs. Chas., Wellington.
*Jones, Mrs. E. W., Wellington.
*Moss, Mrs. E. W., Wellington.
*Odom, Mrs. James A., Memphis.
Townsend, Mrs. S. H. (Sec.), Childress.
Wilson, Mrs. Winifred, Memphis.

GRAY-WHEELER COUNTIES AUXILIARY

Bellamy, Mrs. Russel Milton, Pampa.
Brown, Mrs. Richard Malcolm, Pampa.
Brunow, Mrs. Vittorio E. Von, Pampa.
Gilliland, Mrs. James Orth, Pampa.
Gooch, Mrs. James Walter, Shamrock.
Hamer, Mrs. James Granberry, Shamrock.
High, Mrs. Clifton Earle, Pampa.
Jones, Mrs. Wm. Calvin (Pres.), Pampa.
*Nicholson, Mrs. Harold Earl, Wheeler.
Overton, Mrs. Marvin Cartmell, Jr., Pampa.
Purviance, Mrs. Walter, Pampa.
Turner, Mrs. Earl Hudson, Pampa.
Walker, Mrs. Glen Russell, Wheeler.
Webb, Mrs. Roy Abner, Pampa.
Wild, Mrs. Wm. Bronnie, Pampa.
Wilder, Mrs. H. Lawler, Pampa.

†Address is Abilene unless otherwise stated.

Ziegler, Mrs. Bernice A., Shamrock.
Ziegler, Mrs. Joel, Shamrock.

LUBBOCK-CROSBY COUNTIES AUXILIARY†

Arnett, Mrs. Saml. Cullen, Jr.
*Benson, Mrs. Martin Henry.
Blake, Mrs. Emerson Millen.
Canon, Mrs. Robt. Travis.
Clark, Mrs. D. McIntrie.
Clark, Mrs. V. V.
Cross, Mrs. D. D.
Dunn, Mrs. Saml. Gilmer.
English, Mrs. Otis Willis.
Ewing, Mrs. M. M.
Hand, Mrs. O. R.
*Hunt, Mrs. E. L.
Hutchinson, Mrs. J. T.
Jenkins, Mrs. B. A. (Pres.), 2124 39th St.
*Key, Mrs. Olan.
*Krueger, Mrs. J. Thos.
Malone, Mrs. F. B.
Mast, Mrs. H. E.
Maxwell, Mrs. H. C.
McCarty, Mrs. Robt. Harris.
Overton, Mrs. M. C.
Rollo, Mrs. J. W.
Smith, Mrs. G. S.
Standefer, Mrs. Fred Wilson.
Stewart, Mrs. A. T.
*Stiles, Mrs. J. H.
Taylor, Mrs. Otis, Jr.
Watkins, Mrs. Mina.
Wilson, Mrs. James D.
Woods, Mrs. L. B.

POTTER COUNTY AUXILIARY‡

Carroll, Mrs. J. Ralph, 2814 Lipscomb.
Churchill, Mrs. T. P., 1309 Bellaire.
Crumley, Mrs. Fred, 704 Virginia.
Duncan, Mrs. Frank, 2047 Hughes.
Duncan, Mrs. R. A., 2102 Tyler.
Flamm, Mrs. Mattie B., 801 La Salle.
*Gist, Mrs. R. D., 2615 Hayden.
Goldston, Mrs. A. B., 2805 Hayden.
Gustin, Mrs. J. W., 313 W. 34th.
*Hendricks, Mrs. J. W., 3009 Hughes.
Keyes, Mrs. R., 2201 Hughes.
Klingensmith, Mrs. W. R., 2415 Lipscomb.
Knight, Mrs. M. H., 1228 Bonham.
Lumpkin, Mrs. A. F., 1100 Tyler.
Marsalis, Mrs. D. S., 1502 Bowie.
Murphy, Mrs. W. O., 1619 Van Buren.
Patton, Mrs. L. K., 2613 Hughes.
Puckett, Mrs. B. M., 2122 Monroe.
Puckett, Mrs. Howard, 2412 Lipscomb.
Randall, Mrs. C. F., 1015 B. Taylor.
Roach, Mrs. D., 1806 Harrison.
Robberson, Mrs. Jason (Sec.), 1001 Avondale.
Royse, Mrs. G. T., 321 Sunset.
Shudde, Mrs. W. J., 2907 Harrison.
Streit, Mrs. A. J., 2413 Hayden.
Swindell, Mrs. H. R., 2113 Van Buren.
Vineyard, Mrs. R. L., 1801 Harrison.
Vineyard, Mrs. S. P., Vineyard Manor Bg.
Vinyard, Mrs. G. T., 1700 Tyler.
Waddill, Mrs. G. M., 705 Tennessee.
White, Mrs. J. B. (Pres.), 2035 Ong.
Winsett, Mrs. A. E., 2208 Hughes.

FOURTH OR SAN ANGELO DISTRICT

Mrs. Charles F. Bailey
Ballinger
Council Woman

BROWN-COMANCHE-MILLS-SAN SABA COUNTIES AUXILIARY¶

Allen, Mrs. Homer B. (Dist. Pres.).
Anderson, Mrs. Wm. B.
*Campbell, Mrs. James J., Goldthwaite, Texas.
Hopper, Mrs. John J. (Sec.).
Horn, Mrs. Jesse M.
*Lobstein, Mrs. Henry L. (Pres.).
Mayo, Mrs. Oscar M.
McFarlane, Mrs. Joe R.
Paige, Mrs. Wendell H.
Pier, Mrs. T. J.
Stephen, Mrs. James J., Goldthwaite, Texas.
*Tottenham, Mrs. J. W.

†Address is Lubbock unless otherwise stated.
‡Address is Amarillo unless otherwise stated.
¶Address is Brownwood unless otherwise stated.

COLEMAN-McCOLLUCH-MASON COUNTIES AUXILIARY

Anderson, Mrs. James P., Brady.
Anderson, Mrs. James S., Brady.
Baze, Mrs. P. A., Mason.
Board, Mrs. J. Paul, Santa Anna.
Cochran, Mrs. Robt. H., Coleman.
Huff, Mrs. Oscar, Mason.
McCall, Mrs. John G., Brady.
McCollum, Mrs. Floyd L., Mason.
McCollum, Mrs. Granville G., Mason.

RUNNELS COUNTY AUXILIARY

Bailey, Mrs. Chas. F. (Sec.), Ballinger.
Chandler, Mrs. O. H., Ballinger.
Dixon, Mrs. J. W., Winters.
Douglas, Mrs. J. G., Ballinger.
Fuller, Mrs. A. L. (Pres.), Ballinger.
Hale, Mrs. F. M., Ballinger.
Halley, Mrs. W. B., Ballinger.
Jennings, Mrs. T. V., Winters.
Lassiter, Mrs. O. R., Ballinger.
Macune, Mrs. J. W., Ballinger.

TOM GREEN COUNTY AUXILIARY†

Anderson, Mrs. Wilson Dennie.
Brown, Mrs. Brian Tuck.
Bunyard, Mrs. J. A. (Sec.), 1302 McKenzie.
Bush, Mrs. W. L.
Finks, Mrs. R. M.
Hixon, Mrs. J. S.
Horney, Mrs. Harlan.
Hutchins, Mrs. F. L.
Kunath, Mrs. Carl A.
Lewis, Mrs. A. L.
Lewis, Mrs. G. L.
*McKnight, Mrs. J. B., Sanatorium, Texas.
McIntire, Mrs. F. T.
Mitchell, Mrs. W. G. (Pres.), 16 N. Jackson.
Nibling, Mrs. G. W.
Potts, Mrs. C. R.
Powers, Mrs. R. L.
Rape, Mrs. J. M.
Round, Mrs. K. B.
Schulkey, Mrs. W. E.
*Schulze, Mrs. V. E.
Sessums, Mrs. J. V.
Smith, Mrs. J. H.
Tester, Mrs. L. K.
Wall, Mrs. D. D.
Womack, Mrs. C. T.
Woodward, Mrs. L. O.

FIFTH OR SAN ANTONIO DISTRICT

Mrs. Wm. L. Secor
Hunt
Council Woman

BEXAR COUNTY AUXILIARY‡

Adams, Mrs. Stuart, 240 Bushnell.
*Alexander, Mrs. C. B., 2003 West Magnolia.
Allen, Mrs. S. W., Plaza Hotel.
Allin, Mrs. Fred A., 1539 Hicks.
Allin, Mrs. Willis W., 1102 Highland Blvd.
Altgelt, Mrs. Daniel B., 167 Schreiner Lane.
Anderson, Mrs. James L., 166 Elizabeth Road.
*Applewhite, Mrs. Scott C., 401 East Park Ave.
Arendt, Mrs. E. J., 625 Shook.
Atkinson, Mrs. D. T., Huebner Rd. Route 2, Box 167.
Atmar, Mrs. R. C., 330 Elmhurst.
Barnett, Mrs. K. H., 223 Laurel Hgts. Pl.
Barnett, Mrs. J. L., 223 Laurel Hgts. Pl.
Barron, Mrs. W. M., 423 Donaldson Ave.
Bates, Mrs. Leroy E., 215 Ewald Street.
Beach, Mrs. Asa, 118 Stanford Drive.
Beach, Mrs. George C., Jr., 117 Artillery Post.
Beck, Mrs. Lewis Krams, 1420 McCullough Ave.
Bell, Mrs. J. D., 205 West Craig.
Bell, Mrs. Wheeler, 214 West Ashby.
Berchelmann, Mrs. A., 901 West Mistletoe.
Biggar, Mrs. J. H., 242 Rockwood.
Bloom, Mrs. B. H., 208 Primera Dr.
Boccelato, Mrs. S. L., 923 West Huisache.
Boehs, Mrs. Charles J., 135 W. Hollywood.
Bondurant, Mrs. W. W., 1710 W. Summit.
Bosshardt, Mrs. Carl E., 340 Lamont.

†Address is San Angelo unless otherwise stated.
‡Address is San Antonio unless otherwise stated.

Bosshardt, Mrs. Charles, 227 Claudia.
*Bowen, Mrs. P. G., 1301 Highland.
*Bowen, Mrs. R. E., 607 East Locust.
*Boyd, Mrs. G. D., 2030 W. Gramercy.
Brown, Mrs. A. A., 719 Howard.
Burg, Mrs. Edgar, 2167 W. Summit.
Burk, Mrs. W. E., 310 Donaldson.
Bush, Mrs. Howard M., 1540 W. Huisache.
Cade, Mrs. C. C., 705 Grayson.
Calder, Mrs. Royall M., 301 W. Hollywood.
Campbell, Mrs. E., Ft. Sam Houston.
Carnahan, Mrs. R. G., 133 E. Rosewood.
Cassity, Mrs. J. C., 325 Cloverleaf.
Cayo, Mrs. E. A., 303 Broadview Kr. W.
Ceyala, Mrs. Henry, 631 Ciruela.
Champion, Mrs. A. N., 135 W. Rosewood.
Chester, Mrs. John B., 1014 Gorgas Circle.
Childers, Mrs. M. A., Jr., 8 Charles Lane.
Christian, Mrs. T. E., 450 Mary Louise Dr.
Clark, Mrs. A. F., 306 E. Craig.
Clark, Mrs. A. P., 438 Dickman Rd.
Clifton, Mrs. Collis B., 1632 W. Olmos Dr.
Cline, Mrs. Leon, 415 W. Broadview Dr.
Cooper, Mrs. Fred B., 116 Laurel Hgts. Pl.
Cooper, Mrs. M. J., 206 Primera Dr.
Copeland, Mrs. J. B., 226 Inslee.
Cotham, Mrs. C. M., 107 Arcadia.
*Cowles, Mrs. A. G., 419 Lynwood.
*Coyle, Mrs. E. W., 213 Grant, Alamo Hgts.
*Coyle, Mrs. J. E., 137 University Ave.
Crain, Mrs. C. E., 110 S. Sabinas.
Crockett, Mrs. R. H., 1826 Sacramento.
Cunningham, Mrs. S. P., 116 W. Woodlawn.
Cutter, Mrs. I. T., 232 W. Lullwood.
Darby, Mrs. Taylor B., 222 Artillery Post.
Davis, Mrs. H. L., 1015 W. Craig.
Davis, Mrs. Milton, 945 W. Huisache.
Davis, Mrs. Raleigh, 636 E. Olmos.
De Coursey, Mrs. E., 2814 Broadway.
DePew, Mrs. E. V., 115 E. Agarita.
Dittmann, Mrs. C. H., 617 Ciruela.
Donap, Mrs. Perry, 1530 W. Summit.
Doss, Mrs. J. M., Sunshine Dr. Box 406.
Dreiss, Mrs. A. M., 319 Mission.
*Dumas, Mrs. E. D., 418 W. French.
Dufner, Mrs. Romie, 415 Naylor.
Eanes, Mrs. Richard H., 463 Burr Road.
Engelke, Mrs. Albert G., 205 Terrell Rd.
Fetzer, Mrs. W. J., 1530 W. Summit.
Fink, Mrs. Frederick, 136 Harrigan Ct.
Folbre, Mrs. T. W., 155 Mandalay.
Forbes, Mrs. M. A., 200 Warwick.
Geyer, Mrs. George H., 747 E. Ashby.
Giesecke, Mrs. Adolph, 203 W. Myrtle.
Giesecke, Mrs. Carl, 105 W. Rosewood.
Gilbreath, Mrs. S. F., 1347 Fulton.
Giles, Mrs. Roy G., 2227 W. Mistletoe.
Glauner, Mrs. F. E., 323 W. Woodlawn.
Gleckler, Mrs. John D., 226 E. Craig.
Glober, Mrs. Lee J., 340 North Drive.
Goeth, Mrs. Carl, 452 Bluebonnet Blvd.
Goeth, Mrs. R. A., 125 E. Huisache.
Goode, Mrs. J. W., 125 E. Rosewood.
Goodson, Mrs. T. N., Gunter Hotel.
Goodwin, Mrs. Roy G., 124 Barilla.
Grant, Mrs. W. A., S. A. State Hospital.
Graves, Mrs. Amos M., 222 Genesee Rd.
Graves, Mrs. W. E., 804 W. Poplar.
Grimland, Mrs. G. A., 216 Norwood Ct.
*Haggard, Mrs. Charles H., 614 Lamont Ave.
*Haggard, Mrs. F. N., 615 East Olmos.
Hagler, Mrs. M. C., New Braunfels.
*Haile, Mrs. J. T., 912 W. Agarita.
*Hairston, Mrs. J. T., 426 Donaldson.
Hamilton, Mrs. W. S., 207 Grandview.
Harding, Mrs. R. B., Kelly Field.
Hart, Mrs. William Lee, 202 Artillery.
Hartman, Mrs. Albert W., Jr., 138 E. Elsmere.
Hartman, Mrs. Henry, 831 W. Lullwood.
Heck, Mrs. W. H., 421 Mary Louise Dr.
Heinen, Mrs. Allen, Seguin, Texas.
Helfer, Mrs. Lewis M., Route 2, Box 342C.
Herff, Mrs. A. R., 363 Terrell Rd.
Herff, Mrs. F. P., 615 W. Ashby.
*Hill, Mrs. Herbert, 311 W. Lullwood.
*Hill, Mrs. Lucius, 131 Brittany Drive.
Hill, Mrs. W. H., 322 E. Park.
Hinman, Mrs. A. J., New Braunfels, Texas.
Holshouser, Mrs. Chas. A., 409 King Ct.
*Hoskins, Mrs. Henry, 343 W. Summit.
Hunt, Mrs. Kent M., 6425 S. Flores.
*Jackson, Mrs. L. B., 203 W. Mulberry.
Jackson, Mrs. Ralph, 210 Mary Louise Dr.
Jackson, Mrs. T. T., Gunter Hotel.
Johnson, Mrs. Allen, 310 Holly.
Johnson, Mrs. Harry McC., Jr., 130 Norwood Ct.
*Johnson, Mrs. Max E. (Pres.), 133 E. Huisache.

*Johnson, Mrs. W. J., S. A. State Hospital.
Judkins, Mrs. O. H., 240 W. Summit.
Kahn, Mrs. I. S., 128 Harrison.
Kaliski, Mrs. Belle, 339 E. Craig Pl.
Keating, Mrs. P. M., 222 King William.
Kellog, Mrs. Douglas S., 1015 Gorgas.
Kelly, Mrs. Lily Goeth, 125 E. Huisache.
Kendall, Mrs. Chas. B., 1013 Gorgas Circle.
*King, Mrs. W. A., 912 W. Agarita.
Kinney, Mrs. Nat, 222 E. Poplar.
Koerth, Mrs. C. J., 6400 N. New Braunfels.
*Kopecky, Mrs. Joseph, 627 Lamont.
Leap, Mrs. Harry L., 241 King William.
Lee, Mrs. L. L., 437½ Queene Anne Ct.
Lehmann, Mrs. C. Ferd, 336 Terrell Rd.
Leopold, Mrs. Henry N., 137 Brittany Dr.
Letteer, Mrs. C. R., 910 Howard.
Leuderman, Mrs. W. S.
Livingston, Mrs. Chas. S., 315 Princeton.
Lochte, Mrs. E. R., 2001 West Summit.
Lyon, Mrs. E. F., 2115 W. Gramercy.
Madigan, Mrs. Patrick S., 316 Brahan.
Manhoff, Miss Sarah, 818 W. Woodlawn.
*Martin, Mrs. Frank, 523 King William.
Martin, Mrs. Oscar O., 1136 Hammond.
Mathews, Mrs. J. L., 114 E. Gramercy.
Maxwell, Mrs. E. A., 506 Furr Dr.
Maxwell, Mrs. W. W., 932 W. Woodlawn.
McCamish, Mrs. E. W., 120 E. Magnolia.
McCarroll, Mrs. W. H., 1002 W. Huisache.
McCurdy, Mrs. M. W., 847 Peck.
McGehee, Mrs. Charles, 246 Quentin Dr.
McGehee, Mrs. J. S., 130 W. Norwood.
*McIntosh, Mrs. J. A., 208 W. Woodlawn.
McPeak, Mrs. Edgar M., 2000 W. Kings Highway.
McSween, Mrs. Paul, St. Anthony Hotel.
Merrick, Mrs. Edward H., 1836 Leehall.
*Milburn, Mrs. Conn L., 331 W. Magnolia.
Mileau, Mrs. Alexander, 514 Pershing.
Miller, Mrs. J. B., 1811 E. Commerce.
Miller, Mrs. J. B., 1813 E. Commerce.
Miller, Mrs. R. A., 308 Park Hill Dr.
*Minter, Mrs. Merton M., St. Anthony Hotel.
Mitchell, Mrs. J. L., 302 Barrett Pl.
Moore, Mrs. John L., Ft. Sam Houston.
Moore, Mrs. O. S., 1846 W. Magnolia.
Moore, Mrs. S. Foster, 103 Bluebonnet Blvd.
Moore, Mrs. T. E., 110 E. Craig.
Morris, Mrs. E. T., San Benito, Texas.
Morris, Mrs. Sam, 1 Staff Post.
Mueller, Mrs. Edwin, 154 Barilla.
Muldoon, Mrs. W. E., 239 Stanford.
Nesbit, Mrs. W. E., 221 W. Mistletoe.
Newhouse, Mrs. A. O., 325 W. Magnolia.
Nicholson, Mrs. J. R., 251 Primera Dr.
Nixon, Mrs. J. W., 129 E. Gramercy.
Nixon, Mrs. P. I., 202 Courtland.
Nunn, Mrs. J. A., 123 Perry Ct.
Ogilvie, Mrs. H. H., 137 E. Elsmere.
Oldham, Mrs. J. P., 612 Goliad.
Oxford, Mrs. J. W., Floresville, Texas.
Pagenstecher, Mrs. G. A., 500 Elizabeth Road.
Partain, Mrs. R. A., 1414 W. Rosewood.
Paschal, Mrs. Frank L., 403 Maverick.
Paschal, Mrs. George, 411 Maverick.
Passmore, Mrs. B. H., 416 Maverick.
Passmore, Mrs. G. G., 116 W. Cypress.
Pettus, Mrs. Wheeler, 323 E. Park.
Phelps, Mrs. G. D., 616 Sunshine Dr. East.
Pinson, Mrs. C. C., 401 E. Locust.
*Pipkin, Mrs. J. Lewis, 511 Brackenridge.
*Poth, Mrs. D. O., 220 Primera Dr.
Potthast, Mrs. O. J., 419 King William.
*Pressly, Mrs. T. A., 408 Mary Louise Dr.
Pridgen, Mrs. John L., 619 W. Mistletoe.
Pritchett, Mrs. Belvin, 126 Stanford Dr.
Putnam, Mrs. Lincoln F., Ft. Sam Houston.
Quade, Mrs. Omar, 1016 Gorgas.
Ramsdell, Mrs. M. A., 412 Harrison.
Reily, Mrs. William A., 1940 W. Summit.
Reinarz, Mrs. B. H., 114 Alexander Hamilton.
Reveley, Mrs. James E., 448 Vanderbilt.
Rhea, Mrs. Robt. L., Jr., 239 Allensworth.
Rhea, Mrs. Robt. L., Sr., 304 E. Courtland.
Rice, Mrs. Lee, 343 W. Gramercy.
Ritch, Mrs. Allen, 139 N. Drive.
Robbins, Mrs. A. W., 502 Furr Dr.
Roberts, Mrs. R. A., 1553 W. Huisache.
Robertson, Mrs. Wilber, 540 Lamont.
Roseborough, Mrs. F. H., 1040 W. Woodlawn.
Rosenzweig, Mrs. M. M., 255 E. Rosewood.
Ross, Mrs. Loyd, 521 W. Gramercy.
Ross, Mrs. Rex R., 614 E. Olmos Dr.
Royals, Mrs. W. C., 1009 Gorgas.
*Russ, Mrs. Sterling E., 614 E. Olmos.
Russ, Mrs. W. B., 1301 Belknap.
Russell, Mrs. Dan A., 500 Patterson.
Saegert, Mrs. A. H., 807 Medical Arts Bldg.
Sample, Mrs. Roy O., 207 Park Lane.
Schwartzberg, Mrs. Sam., 131 Taylor.
Scott, Mrs. R. E., 315 Cloverleaf.
Scull, Mrs. C. E., 115 Paseo Encinal.
Seeley, Mrs. Sam F., Ft. Sam Houston.
Sharp, Mrs. T. H., 126 Park Hill Dr.
Shepherd, Mrs. W. F., 1401 Highland.
Shipman, Mrs. E. D., 551 Cincinnati.
Sorell, Mrs. F. W., 301 Luther Dr.
Spence, Mrs. Parker, 605 W. Mulberry.
Stansell, Mrs. Paul, 1815 W. Summit.
Steele, Mrs. V. S., 155 Harrison Ave.
Steed, Mrs. Frank (Sec.), 1542 W. Magnolia.
Steinberg, Mrs. F. W., 237 Castano.
Stieler, Mrs. Albert, 1326 Schley.
Stout, Mrs. B. F., 110 Lynwood.
Stuck, Mrs. Walter, 404 Shaw St.
Sturm, Mrs. C. E., S. A. State Hospital.
Sugg, Mrs. W. R., 308 Morningside Dr.
Sutton, Mrs. Robt. S., 342 Meridith Dr.
Sweet, Mrs. Horace, 222 West Lullwood.
Swinny, Mrs. Boen, Coker Loup.
Sykes, Mrs. E. M., 201 Charles Rd.
Taylor, Mrs. C. W., 276 Mandalay Dr. West.
Taylor, Mrs. Sam H., 343 W. Hollywood.
*Tennison, Mrs. Chas. W., 308 Argo.
*Thomas, Mrs. R. P., 234 Rosemary.
Timmons, Mrs. O. H., 928 W. Agarita.
*Tipton, Mrs. Van C., 2127 W. Magnolia.
*Todd, Mrs. D. A., 305 Thelma.
Trolinger, Mrs. H. J., 218 E. Rosewood.
Tullos, Mrs. H. S., 200 E. Pyron.
Turner, Mrs. James H., 116 Artillery Post.
Urrutia, Mrs. Adolfo, 107 Rosemary.
Venable, Mrs. J. Manning, 139 Park Hill Dr. East.
Vickerson, Mrs. A., Ft. Sam Houston.
Walsh, Mrs. F. C., Hunt, Texas.
Walthall, Mrs. T. J., 242 Lynwood.
Walthall, Mrs. Walter, 321 W. Cypress.
Warriner, Mrs. B. B., Seidel Rd.
Watts, Mrs. J. A., 433 W. Woodlawn.
Weatherford, Mrs. E. W., 241 E. Lullwood.
Weatherford, Mrs. W. F., 321 W. Cypress.
Weinfield, Mrs. L. M., 114 Natalen.
Weiss, Mrs. Victor J., 443 Hammond.
Wessels, Mrs. Andrew, 401 Torcido Dr.
West, Mrs. Albert J., Marfa, Texas.
Whitacre, Mrs. Stanley, 228 Alamose.
Williams, Mrs. V. H., 112 Cloverleaf.
Winter, Mrs. J. W., 139 E. Rosewood.
Wolf, Mrs. W. M., 514 W. Ashby.
Woodland, Mrs. John C., 109 Artillery.
Woods, Mrs. C. B., 336 Wildrose.
Worsham, Mrs. J. W., 128 Rosemary.
Wright, Mrs. Rennie, New Braunfels, Texas.
Wyatt, Mrs. Byron W., 206 Claremont.
Wynekin, Mrs. H. O., 1105 W. French.
Young, Mrs. Charles T., 135 Carey.

KERR-KENDALL-BANDERA COUNTIES AUXILIARY

Black, Mrs. A. J., Kerrville.
Domingues, Mrs. P. J., Kerrville.
Fellows, Mrs. L., Fredericksburg.
Gallatin, Mrs. H. H., Kerrville.
*Gregg, Mrs. William E., Kerrville.
Hanus, Mrs. J. J., Fredericksburg.
Herrick, Mrs. J. C., Kerrville.
Ivey, Mrs. H. T., Legion.
Jackson, Mrs. J. D., Kerrville.
Jones, Mrs. C. C., Comfort.
*Keidel, Mrs. Victor (Pres.), Fredericksburg.
Keyser, Mrs. L. L., Fredericksburg.
Klein, Mrs. J. J., Legion.
McClellan, Mrs. C. L., Kerrville.
McDonald, Mrs. J. E., Kerrville.
Miller, Mrs. Sidney, Legion.
*Minsch, Mrs. Walter A., 506 Elm St., Kerrville.
Peden, Miss Adah (Sec.), Fredericksburg.
Pennington, Mrs. J. H., Legion.
Pfieffer, Mrs. H. G., Fredericksburg.
Reed, Mrs. E. C., Legion.
Reid, Mrs. H. P., Legion.
*Secor, Mrs. William L., Hunt.
Swayze, Mrs. H. Y., Kerrville.
Tainter, Mrs. L. K. (Deceased Nov. 1939), Fredericksburg.
Thompson, Mrs. S. E., Kerrville.
Webb, Mrs. L. H., Legion.
Woodall, Mrs. J. B., Kerrville.

SIXTH OR CORPUS CHRISTI DISTRICT

Mrs. Phil Bleakney
Harlingen
Council Woman

CAMERON-WILLACY COUNTIES AUXILIARY

*Ashcraft, Mrs. E. J., Harlingen.
Baden, Mrs. E. E., Raymondville.
Bennack, Mrs. Geo. E., Raymondville.
Bleakney, Mrs. Phil A., Harlingen.
Calderia, Mrs. F. D., Harlingen.
Casey, Mrs. J. D., San Benito.
Cash, Mrs. C. M., San Benito.
Conley, Mrs. C. C., Raymondville.
Crockett, Mrs. John A., Harlingen.
Davidson, Mrs. N. A., Harlingen.
Fox, Mrs. I. G., Harlingen.
Gallaher, Mrs. G. L., Harlingen.
Jones, Mrs. J. H., Raymondville.
La Motte, Mrs. T. J., Harlingen.
Maxwell, Mrs. Paul R., Harlingen.
Monger, Mrs. Neal D. (Pres.), 357 Austin, San Benito.
Morris, Mrs. E. T. (Sec.), 835 N. Bonham, San Benito.
Pollard, Mrs. J. A., Harlingen.
Reed, Mrs. Emil P., Brownsville.
Shafer, Mrs. Troy, Harlingen.
Smith, Mrs. F. Nestor, Harlingen.
Utley, Mrs. R. E., Harlingen.
Watkins, Mrs. J. C., Harlingen.

HIDALGO COUNTY AUXILIARY

Brown, Mrs. Geo. Van Amber (Pres.), McAllen.
Conard, Mrs. J. W., Pharr.
Frenzel, Mrs. Paul H. (Sec.), Donna.
Guerra, Mrs. G. A., Edinburg.
Hamme, Mrs. C. J., Edinburg.
Hamme, Mrs. R. E., Edinburg.
Hyder, Mrs. D. C., Donna.
Ivey, Mrs. J. B., Weslaco.
*Lawler, Mrs. Marion R., Mercedes.
May, Mrs. J. W., Donna.
Moore, Mrs. L. H., McAllen.
Osborn, Mrs. Alfred, McAllen.
Southwick, Mrs. Loyd M., Edinburg.
Webb, Mrs. J. G., Mercedes.
*Whigham, Mrs. Herschel E., McAllen.
Whigham, Mrs. W. E., McAllen.
Wilson, Mrs. A. D., Mission.

NUECES COUNTY AUXILIARY†

Arnim, Mrs. L. C., 423 Louisiana.
*Ashmore, Mrs. Alvin J., Ocean Dr.
Barnard, Mrs. W. B. (Pres.), Shell Rd.
Bickley, Mrs. E. T., 211 Indiana.
Carter, Mrs. N. D., 615 Del Mar.
Crain, Mrs. C. F., 714 Craig.
Eckhardt, Mrs. Kleberg, 1222 6th.
Edwards, Mrs. Thos. W., 329 Southern.
Ellis, Mrs. Frank, 339 Cole.
Furman, Mrs. McIver, 310 Atlantic.
Gaddis, Mrs. H. W., 330 Texas.
*Garrett, Mrs. L. M., 2650 Topeka.
Giles, Mrs. E. Jack (Sec.), 309 Ohio.
Gray, Mrs. Paul, 2612 Topeka.
Guttman, Mrs. L. P., Ocean Dr.
Hyder, Mrs. P. L., 145 Southern.
Kemp, Mrs. K. J., 505 Naples.
Koepsel, Mrs. O. S., 118 Southern.
Martin, Mrs. Sterling B., 128 Del Mar.
Moller, Mrs. Turner G., Oak Park.
Perkins, Mrs. M. J., 345 Clifford.
Pilcher, Mrs. J. F., 440 Naples.
St. John, Mrs. Ralph V., 225 Indiana.
Sharp, Mrs. James, Ocean Dr.
Sigler, Mrs. Robert, Ocean Dr.
Sloan, Mrs. John J., 436 Louisiana.
Stewart, Mrs. Charles D., 3rd St.
*Stroud, Mrs. S. K., 450 Cole.
Swearingen, Mrs. R. G., Morningside.
Thompson, Mrs. Burch, 614 Southern.

SEVENTH OR AUSTIN DISTRICT

Mrs. T. D. Vaughn
Bertram
Council Woman

LAMPASAS-BURNET-LLANO COUNTY AUXILIARY

Allen, Mrs. George Scott, Burnet.
Bowman, Mrs. A. C., Llano.
Black, Mrs. D. W., Lampasas.

†Address is Corpus Christi unless otherwise stated.

Brook, Mrs. W. M., Lampasas.
Buchanon, Mrs. H. R., Lampasas.
Edens, Mrs. H. L., Bertram.
Faires, Mrs. C. H., Bertram.
Fowler, Mrs. W. Y., Sr., Llano.
Gaddy, Mrs. H. R., Lampasas.
Gray, Mrs. G. L., Llano.
Hoerster, Mrs. J. H., Llano.
Landrum, Mrs. M. M., Lampasas.
McFarlin, Mrs. R. W., Bertram.
Nanney, Mrs. A. L., Marble Falls.
Paschall, Mrs. Sam, Burnet.
*Rollins, Mrs. H. B., Lampasas.
Sheppard, Mrs. Joe A., Burnet.
Shepperd, Mrs. R. L., Llano.
Taylor, Mrs. N. B., Lampasas.
*Vaughn, Mrs. T. D. (Pres.), Bertram.
Willerson, Mrs. D., Lampasas.

TRAVIS COUNTY AUXILIARY†

Anderson, Mrs. J. D., 1100 Guadalupe.
Auler, Mrs. Hugo, 508 Greenway.
*Beck, Mrs. J. W. E. H. (Dist. Pres.), 1204 Claire.
Black, Mrs. W. B., 401 W. 32nd.
Boerner, Mrs. Annie Louise, 108 E. 16th.
Bradfield, Mrs. Martha, 1918 Robbins Pl.
Brown, Mrs. M. I., Austin State School.
Brownlee, Mrs. C. H., 1901 State.
Carter, Mrs. C. E., 603 Carolyn.
Castner, Mrs. C. W., 2106 Newfield Lane.
*Coleman, Mrs. J. M. (Pres.), 2516 Bridle Path.
Coogle, Mrs. C. P., 1910½ Robbins Place.
Cooper, Mrs. R. A., 1407 Newfield Lane.
*Cox, Mrs. G. W., 1512 Forest Trail.
Darnall, Mrs. Chas. M., 1403 W. 29th.
*Dashiell, Mrs. A. M., 1312 Elton Lane.
*Davis, Mrs. W. A., 3405 Tom Green.
Eckhardt, Mrs. J. C. A., 2300 Rio Grande.
Edens, Mrs. Lee, 2814 San Pedro.
Eppright, Mrs. Ben R., Windsor Rd.
Esquivel, Mrs. S., 3106 Harris Park Ave.
*Frobese, Mrs. J. R., 1408 Hardouin Ave.
Gambrell, Mrs. Wm. M., 2101 Rio Grande.
Gibson, Mrs. J. W., 3400 Duval.
Gilbert, Mrs. G. H., 3610 Windsor Rd.
Gilbert, Mrs. J. T., 1513 Forrest Trail.
Gilbert, Mrs. Joe, 1402 West Avenue.
Gondolf, Mrs. H. J., 506 W. 14th.
Harper, Mrs. H. W., 2216 Rio Grande.
Hilgartner, Mrs. H. L., Bowman Rd.
Holland, Mrs. L. F., 301 W. 8th.
Hudson, Mrs. S. E., 706 San Antonio.
*Jordan, Mrs. R. C., State Hospital.
Key, Mrs. Sam, 1225 Windsor Rd.
Kratz, Mrs. T. W., 1504 Elton Lane.
Luckey, Mrs. G. W., 1504 A Wooldridge Drive.
McCrummen, Mrs. Thomas D., 2300 Windsor Rd.
McElhenney, Mrs. T. J., 1511 Rainbow Bend.
*Morris, Mrs. Truman, 1611 Wethersfield Rd.
Murray, Mrs. R. V., 408 W. 32nd.
Nau, Mrs. Carl, 4207 Ave. H.
Nichols, Mrs. J. R., 800 Rio Grande.
Perkins, Mrs. H. Clay, 807 Leonard.
Richardson, Mrs. Dalton, 1111 W. 11th.
Robison, Mrs. J. T., 1109 Gaston.
Scott, Mrs. Z. T., 3700 Windsor Rd.
Smith, Mrs. W. A., 1904 Sharon Lane.
Standifer, Mrs. C. H., Austin State Hosp.
Swift, Mrs. E. V., 2002 Sharon Lane.
Taylor, Mrs. Summerfield, 1219 Marshall Lane.
Thomas, Mrs. J. C., 3 Niles Rd.
Thornhill, Mrs. G. F., 1601 Pease Rd.
Watt, Mrs. T. N., 1106 Colorado.
White, Mrs. B. O., 4207 Duval.
White, Mrs. Paul L., 2812 Glenview.
Williams, Mrs. Harriss, 1628 Palma Plaza.
Williams, Mrs. W. E., 1004 Gaston Ave.
Williams, Mrs. W. E., Sr., Driskill Hotel.
*Wilson, Mrs. Rabun T., 1311 Murray Lane.
Wooten, Mrs. Joe S., 1800 Lavaca.

WILLIAMSON COUNTY AUXILIARY

Cornick, Mrs. H. W., Georgetown.
*Doak, Mrs. E. K., Taylor.
*Foster, Mrs. C. C. Granger.
Johns, Mrs. Jay J., Taylor.
Jopling, Mrs. J. L. (Pres.), Taylor.
Kreneck, Mrs. E. M., Taylor.
Martin, Mrs. John R., Georgetown.
Rice, Mrs. A. J., Georgetown.
Swanson, Mrs. W. R., Taylor.

†Address is Austin unless otherwise stated.

HONORARY MEMBERS

Floekinger, Mrs., Taylor.
Helms, Mrs. W. L., Taylor.
Kirkpatrick, Mrs. S. R., Thrall.
Wedemeyer, Mrs. G. A., Taylor.

EIGHTH OR DEWITT DISTRICT

Mrs. Harvey Renger
Hallettsville
Council Woman

DEWITT-LAVACA COUNTIES AUXILIARY

Allen, Mrs. George, Yorktown.
Boothe, Mrs. S. P., Cuero.
Boyle, Mrs. J. W. (Sec.), Shiner.
Brown, Mrs. Harry, Jr., Yoakum.
Brown, Mrs. Harry, Sr., Yoakum.
*Burns, Mrs. Helen, Cuero.
Dobbs, Mrs. J. C., Cuero.
Douthit, Mrs. W. E., Cuero.
*Duckworth, Mrs. Marvin, Cuero.
Gray, Mrs. J. W., Yoakum.
Jaeggli, Mrs. Sam, Moulton.
Marek, Mrs. E. H., Yoakum.
Milner, Mrs. Robert, Yoakum.
Renger, Mrs. Harvey, Hallettsville.
Renger, Mrs. Paul, Jr., Hallettsville.
Renger, Mrs. Paul, Sr., Hallettsville.
Wagner, Mrs. Frank (Pres.), Shiner.
Wagner, Mrs. Robert, Cuero.

WHARTON-JACKSON COUNTIES AUXILIARY

Andrews, Mrs. J. M., Wharton.
Bauknight, Mrs. J. M., Ganado.
Blair, Mrs. C. M., Wharton.
Blair, Mrs. William, Wharton.
Blasingame, Mrs. F. J. L., Wharton.
Davidson, Mrs. G. L., Wharton.
Davidson, Mrs. T. L. (Pres.), Wharton.
Giddings, Mrs. Harold D., El Campo.
Johnson, Mrs. Ralph G., Newgulf.
Outlar, Mrs. Bolton, Wharton.
Reeves Mrs. H. V., El Campo.
Reid, Mrs. Jack H., Wharton.
Rugeley, Mrs. Frank R., Wharton.
Rushing, Mrs. John B., El Campo.
Schuhmann, Mrs. Dan, East Bernard.
Schulze, Mrs. Gus, El Campo.
Simon, Mrs. J. W., Newgulf.
Weinheimer, Mrs. Edwin A., El Campo.
Whitfield, Mrs. W. E. (Sec.-Treas.), Edna.

NINTH OR SOUTHERN DISTRICT

Mrs. J. B. Johnson
4627 Sherman, Galveston
Council Woman

AUSTIN-WALLER COUNTIES AUXILIARY

Brown, Mrs. Walter T., Wallis.
Gordon, Mrs. Virgil L., Sealy.
Hover, Mrs. Frank W., Sealy.
Jones, Mrs. Malcolm A. (Pres.), Hempstead.
Neely, Mrs. Jubal A., Bellville.
Roensch, Mrs. Herbert E., Bellville.
Schmid, Mrs. R. J., New Ulm.
Steck, Mrs. Otto E. (Sec.), Bellville.
Thiltgen, Mrs. Winston W., Bellville.
Trenckmann, Mrs. Otto A., Bellville.

FORT BEND COUNTY AUXILIARY

Andrew, Mrs. Frank Allin, Richmond.
Balke, Mrs. John Walter (Pres.), Rosenberg.
Nichols, Mrs. Clarence Virgil, Richmond.
Slaughter, Mrs. Carlos Alva, Sugarland.
Weeks, Mrs. John William, Rosenberg.
Yates, Mrs. John S., Rosenberg.
Yates, Wilbur, Rosenberg.
*Yelderman, Mrs. Gus Clarence, Rosenburg.

GALVESTON COUNTY AUXILIARY†

Aves, Mrs. F. W., Dickinson, Texas.
Barbato, Mrs. Lewis, 4320 H½.
Bennett, Mrs. J. H., 801 H.
Bodansky, Mrs. Meyer, 1227 H.
Brindley, Mrs. R. E., 4320 Sherman Drive.

†Address is Galveston unless otherwise stated.

Cone, Mrs. R. E., 24 Cedar Lawn North.
Cook, Mrs. W. R., 4510 Caduceus Place.
Decherd, Mrs. George M., Lamarque, Texas.
Delaney, Mrs. J. J., 4612 Avenue P.
Eggers, Mrs. G. W. N., 4625 Caduceus Place.
Fisher, Mrs. W. C., Jr., 3215 P.
Flautt, Mrs. J. A., 1805 18th St.
Ford, Mrs. Hamilton, 1510 O.
Fowler, Mrs. F. W., 3509 P.
Gamm, Mrs. K. S., Marine Hospital.
Gammon, Mrs. Wm., 63 Cedar Lawn Circle.
*Garbade, Mrs. Francis A., 2001 33d.
Griffin, Mrs. Lawrence, 728 Avenue K.
Harris, Mrs. L. R., 702 Market.
Harris, Mrs. Sarah, 2723 J.
Harris, Mrs. Titus, 1428 J.
Herrmann, Mrs. George, 1409 Market.
Hyde, Mrs. Arthur, 3503 P.
Jinkins, Mrs. A. J., 4907 Austin Dr.
*Jinkins, Mrs. J. L., 3121 P.
Jinkins, Mrs. W. J., 2827 O.
*Johnson, Mrs. Jesse B., 4627 Sherman Dr.
Klatt, Mrs. Emil, 1605 23d.
*Kleberg, Mrs. Walter, 2221 35th.
Knight, Mrs. H. O., 3120 Q.
Lee, Mrs. Geo. T., 4600 Caduceus.
Lewis, Mrs. B. O., Marine Hospital.
*Mares, Mrs. C. F. (Pres.), 4802 Denver Dr.
*Marr, Mrs. W. L., 4602 P.
McLarty, Mrs. E. S., Buccaneer Hotel.
Moore, Mrs. Robert, 2127 M.
Oatman, Mrs. C. D., Fort Crockett.
Randall, Mrs. Edward, 2004 J.
Randall, Mrs. Edward, Jr., 3510 P.
Robinson, Mrs. H. R., 3420 O.
Schwab, Mrs. E. H., Lamarque, Texas.
Sharp, Mrs. W. B., 1724 Boulevard.
Sheckles, Mrs. Lloyd, 1819 J.
Singleton, Mrs. A. O., 1602 J.
Snodgrass, Mrs. S. R., 4817 N½.
Spiller, Mrs. W. F., 3823 P½.
Stephens, Mrs. E. M. F., 3115 P.
Stephens, Mrs. W. W., 4525 N½.
Sykes, Mrs. C. S., 4628 Sherman Dr.
Templin, Mrs. S. S., Lamarque, Texas.
*Thompson, Mrs. E. R., 1508 J.
Wall, Mrs. D. P., 1202 J.
Williams, Mrs. J. E., 720 Broadway.
Wilson, Mrs. L. R., 3328 O.

HARRIS COUNTY AUXILIARY†

Adam, Mrs. G. F., 3225 Binz.
Agnew, Mrs. J. G., 2303 Sunset Blvd.
Alexander, Mrs. H. L., 1855 Portsmouth.
Alexander, Mrs. J. C., 909 Sul Ross.
Allen, Mrs. N. N., 1203 Lovett Blvd.
Alvarez, Mrs. John A., 5309 Cherokee.
Andrews, Mrs. T. A., Katy Rd.
Armentrout, Mrs. C. R., 3229 Calumet.
Armstrong, Mrs. E. M., 1128 Bissonnet.
Austraw, Mrs. H. H., 1218 West Gray.
Aydam, Mrs. C. W., 307 W. Pierce.
Aves, Mrs. C. M., 1749 South Blvd.
Baird, Mrs. V. C., 2321 Bellaire Blvd.
Barker, Mrs. W. E., 1712 Marshall.
Barnes, Mrs. Frank L., 10 Chelsea Pl.
Bayer, Mrs. B. H., 2035 Courtland.
Becker, Mrs. Arthur, Brenham, Texas.
Bell, Mrs. William E., 1933 Norfolk.
Bertner, Mrs. E. W., Rice Hotel.
Billups, Mrs. J. T., 3018 Wichita.
Bloom, Mrs. F. A., 3457 Locke Lane.
Bloxsom, Mrs. Allan Penny, 2240 Chilton Rd.
Blundell, Mrs. J. R., 2220 Stanmore.
Bonham, Mrs. R. F., 3419 Wickersham Lane.
Bost, Mrs. J. R., 2941 Chevy Chase.
Bourdon, Mrs. Lynne L., 2315 Watts.
Bowen, Mrs. Ralph, 3509 Montrose Blvd.
Boyd, Mrs. A. N., 3117 Avalon.
Braden, Mrs. A. H., 2351 Kelving Dr.
Bradford, Mrs. F. K., 1714 Bolsover.
Bressler, Mrs. J. L., 2346 Tangley Rd.
Brown, Mrs. James A., 2505 Lincoln.
Brown, Mrs. John W., 1305 Fairview.
Bruder, Mrs. W. H., 245 W. 18th St.
Bruhl, Mrs. C. K., 1706 North Blvd.
Bryan, Mrs. W. G., 4820 San Jacinto.
Burke, Mrs. Thomas W., 3402 Wickersham Lane.
Burr, Mrs. Harry B., 6407 Peerless.
Calhoun, Mrs. C. A., 903 Branard.

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Campbell, Mrs. W. D., 2515 McClendon.
Caplovitz, Mrs. H., 2507 Arbor.
Carrico, Mrs. Carl C., 1951 Lombardy.
Chandler, Mrs. E. A., 3436 Rosedale.
Clapp, Mrs. J. Alston, Jr., 1722 Rice Blvd.
Clarke, Mrs. H. H., 2015 Dryden Rd.
Clarke, Mrs. J. E., 2124 Inwood Dr.
Cohen, Mrs. Raymond, 709 Avondale.
Collette, Mrs. Allen, 2604 Calumet Dr.
Compere, Mrs. T. H., 2631 Fenwood.
*Conner, Mrs. W. Harris, 1732 Alvans.
Coole, Mrs. Walter A., 818 Hathaway.
Coop, Mrs. B. F., 1536 Heights Blvd.
Coulter, Mrs. W. W., 504 Hathaway.
Crigler, Mrs. Cecil M., 2135 Del Monte Dr.
Cruse, Mrs. P. R., 208 Sul Ross.
Cummings, Mrs. H. W., Jr., 608 Harold.
Cunningham, Mrs. G. N., 1818 Richmond Road.
Dailey, Mrs. J. Emerson, 2043 Swift.
Daniel, Mrs. Joe E., 4500 Rossmoyne.
David, Mrs. S. D., 4003 Mt. Vernon.
Davis, Mrs. C. Q., 8252 Detroit.
*Denman, Mrs. P. R., 1220 Southmore.
DeVore, Mrs. Neal M., 1971 W. McKinney.
*Dickson, Mrs. J. Charles, 5310 Mandell.
Doak, Mrs. N. P., 2230 Branard.
Donovan, Mrs. Thomas J., 3618 Robinhood.
Duggan, Mrs. Leroy B., 1607 Calumet.
Dunkerly, Mrs. Allen K., 8116 Grafton.
Durham, Mrs. M. E., 438 W. 21st.
Durrance, Mrs. F. Y., 2124 Albans Rd.
*Ehlers, Mrs. H. J., 2112 Brentwood.
Eidman, Mrs. F. G., 1449 Lawson.
Embree, Mrs. E. D., 1915 Branard.
Engelhardt, Mrs. H. A., 2208 Southmore.
Faris, Mrs. A. M., 2201 South Blvd.
Feagin, Mrs. H. C., 3806 Garrott.
Filippone, Mrs. J. M., 1334 West Bell.
Fitch, Mrs. E. O., 1832 Kirby Dr.
Flynt, Mrs. O. P., 4314 Rossmoyne.
Foote, Mrs. S. A., 2610 Stanford.
*Foster, Mrs. J. B., 2020 West Main.
Foster, Mrs. J. H., Bay Ridge, Texas.
Frazer, Mrs. G. B., 2505 Bellaire.
Freundlich, Mrs. Thomas, 419 Avondale.
Gates, Mrs. C. S., 3119 Avalon.
Glen, Mrs. J. K., 4412 Montrose Blvd.
Glover, Mrs. F. S., 1842 West Alabama.
Goar, Mrs. E. L., 3203 Huntingdon.
*Graves, Mrs. Ghent, 3416 Garrott.
*Graves, Mrs. M. L., 11 Shadowlawn.
Gray, Mrs. E. N., 2406 Southmore.
Green, Mrs. C. C., 5328 Institute Lane.
Greenwood, Mrs. James, Jr., 1932 Dryden Road.
*Greenwood, Mrs. James, Sr., Old Main St. Road.
*Greer, Mrs. A. E., 2121 Oakdale.
Greer, Mrs. David, 5503 Crawford.
Griffey, Mrs. E. W., 2218 Troon Road.
Griswold, Mrs. C. M., 2121 Brentwood.
Gunter, Mrs. John, La Grange, Texas.
Haden, Mrs. H. C., 3704 Montrose Blvd.
Hale, Mrs. R. A., 3727 Jardin.
Haley, Mrs. S. W., 1124 West Gray.
*Hamilton, Mrs. C. R., 5111 Caroline.
Hampil, Mrs. C. C., Brazoria, Texas.
Hardy, Mrs. S. B., 1406 Vassar.
Harris, Mrs. C. P., 3421 Mt. Vernon.
Harris, Mrs. Fred, 2404 Inwood Drive.
Harris, Mrs. H. H., 5515 Crawford.
Harris, Mrs. J. W., 5507 Jackson.
Hauser, Mrs. A., 1902 Blodgett.
Hayes, Mrs. H. T., 1702 Main Street.
Heard, Mrs. J. G., 1644 Kipling.
Hill, Mrs. J. M., 719 Chelsea.
Hodges, Mrs. J. E., 2815 Main Street.
Hoeflich, Mrs. C. W., 1603 McGowen.
Holland, Mrs. T. L., 1727 Colquitt.
Hollimon, Mrs. J. H., 4405 Pease.
Howard, Mrs. A. P., 3720 Audubon Place.
Huffman, Mrs. M. M., 2215 North Blvd.
Hughes, Mrs. F. M., 3602 University Blvd.
Jaquish, Mrs. C. J., 1012 East Alabama.
Johnson, Mrs. H. W., 4510 Caroline.
Johnson, Mrs. Seale, 3111 University Blvd.
Johnston, Mrs. R. A., 7 Shadowlawn.
Jorns, Mrs. C. F., 4426 Pease.
Kerr, Mrs. Denton, 1024 Braeswood Blvd.
Kilgore, Mrs. F. H., 3001 Oakdale.
Kincaid, Mrs. H. L., 2301 Wroxton.
Kirkham, Mrs. H. L. D., 3603 Audubon Pl.
Kirkpatrick, Mrs. L. P., 2924 Ella Lee Lane.
Klanke, Mrs. C. W., 8028 Park Pl. Blvd.
Knolle, Mrs. Guy E., 3712 Charleston.
Kreimeyer, Mrs. James H., 2514 Riverside Dr.
Kyle, Mrs. J. Allen, 2202 Crawford.
Lancaster, Mrs. E. H., 2617 Riverside Dr.
Lapat, Mrs. William, 2301 Maroneal.
*Latimer, Mrs. Mark H., 1912 North Blvd.
Lechenger, Mrs. G. C., 4819 Caroline.
Ledbetter, Mrs. A. A., 3262 Reba Dr.
Levy, Mrs. M. D., 5302 Institute Lane.
Liles, Mrs. Ralph, 1922 W. Walker.
Lister, Mrs. S. M., 4209 Montrose Blvd.
*Logue, Mrs. Lyle J., 3340 Del Monte.
Lowe, Mrs. T. E., 4113 Lamar.
Maresh, Mrs. Henry R., 2416 Riverside Dr.
Maresh, Mrs. R. E., 1627 S. Blvd.
Marshall, Mrs. Reagan, 2210 Park.
Martin, Mrs. J. R., Post Oak Rd.
McCulley, Mrs. J. Duncan, 2334 Tangley Rd.
McDaniel, Mrs. W. S., 3112 Wichita.
McDeed, Mrs. W. G., 2111 Sunset Blvd.
McHenry, Mrs. R. K., 612 Marshall.
McIndoe, Mrs. Frank W., 2324 Dryden Rd.
McMeans, Mrs. R. H., 4415 Austin.
McMurrey, Mrs. Allen, 1204 Eagle.
McNeill, Mrs. A. S., 1701 Missouri.
McReynolds, Mrs. I. S., 2108 Banks.
Melton, Mrs. W. Truett, 1740 Sunset Blvd.
Messer, Mrs. J. N., 2818 Southmore.
Meyer, Mrs. Henry S., 5110 Bayard Lane.
Meynier, Mrs. M. J., Jr., 1416 Bonnie Brae.
Miller, Mrs. A. L., 1245 Yale.
Milliken, Mrs. Gibbs, 3120 S. MacGregor Way.
Moers, Mrs. Edwin A., 947 Pecore.
Molloy, Mrs. James P., 2624 Prospect.
Mood, Mrs. G. F., 1929 Dryden Rd.
*Moore, Mrs. J. T., 2604 Travis.
Myers, Mrs. Claude D., 2104 Perham Dr.
Nester, Mrs. Charles R., 1809 MacGregor Ave.
Oliver, Mrs. J. Stanley, 7441 Walker.
Oliver, Mrs. J. T., 2001 Forest Hill.
Orman, Mrs. McDonald, 2335 Glen Haven.
*Page, Mrs. J. Herbert, 2122 Wentworth.
Parker, Mrs. Eugene M., 1725 Wroxton.
Parsons, Mrs. A. M., Montrose Blvd. Apts.
Patterson, Mrs. J. L., 2303½ N. Main.
Peterson, Mrs. Henry A., 3919 Mt. Vernon.
Peterson, Mrs. Carl A., 1831 Maryland.
*Phillips, Mrs. J. R., 2307 Quenby.
Pittman, Mrs. J. E., 3220 Binz.
Poyner, Mrs. H. F., 2248 Chilton Rd.
Priester, Mrs. W. G., 2605 Travis.
Prince, Mrs. H. E., 2125 Bolsover.
Pritchett, Mrs. I. E., 507 Hathaway.
Pugsley, Mrs. Cornelius, 1214 Banks.
Purdie, Mrs. R. M., 6816 Staffordshire.
Qualtrough, Mrs. W. F., 2224 Rosewood.
Rader, Mrs. J. F., 4021 Dallas.
*Ramsay, Mrs. W. E., 2016 E. Alabama.
Raney, Mrs. Lovel W., Main St. Rd.
Red, Mrs. S. C., 817 Caroline.
*Red, Mrs. W. S., Jr., 1857 Norfolk.
*Reece, Mrs. Charles D., 1734 Bolsover.
Renfrow, Mrs. W. F., 2510 Del Monte.
Robbins, Mrs. E. F., 2916 Chevy Chase.
Robinett, Mrs. J. B., Jr., 1508 Isabella.
Rohrer, Mrs. G. E., 808 Willard.
Rollins, Mrs. W. J., 2117 Del Monte.
Ruiz, Mrs. J. J., 4746 Pease.
Rumph, Mrs. Q., 1605 Pease.
Sacco, Mrs. Allan C., 2314 MacGregor Way.
Salerno, Mrs. J. F., 1809 Colquitt.
Sanders, Mrs. C. B., 2204 Sunset Blvd.
Sanderson, Mrs. T. A., 2320 Southgate.
Sansing, Mrs. C. O., 3604 Ella Lee Lane.
Scardino, Mrs. P. H., 4520 Rossmoyne.
Schaefer, Mrs. J. K., 2304 Elmen.
Schilling, Mrs. J. G., 2115 Arbor.
Schultz, Mrs. J. F., 4834 Austin.
Schuster, Mrs. L. C., 1418 Bonnie Brae.
Scott, Mrs. D. W., 2041 Claremont.
*Seale, Mrs. Everett, 1610 Milford.
Secrest, Mrs. P. G., Jr., 2423 Woodhead.
Sinclair, Mrs. T. A., 1801 Heights Blvd.
Slataper, Mrs. F. J., 2001 Wentworth.
Smith, Mrs. B. F., 8 Chelsea Pl.
Smith, Mrs. B. B., 4430 Pease.
Smith, Mrs. E. T., 1903 Rosewood.
Spiller, Mrs. J. B., 4701 Austin.
Spurlock, Mrs. G. H., 3240 Del Monte.
Stackhouse, Mrs. Howard, Jr., 2331 Dryden Rd.
Stalnaker, Mrs. Paul R., 5401 San Jacinto.
Stewart, Mrs. J. M., Katy, Texas.
Stokes, Mrs. M. B., 3509 Graustark.
Stork, Mrs. W. J., 3801 Fannin.
Stough, Mrs. J. T., 1707 Bolsover.
Strassmann, Mrs. E. O., 2310 Binz.
Strozier, Mrs. W. M., 1117 W. Main.
Talley, Mrs. A. T., 2128 Southmore.
Taylor, Mrs. M. J., 3610 Yoakum Blvd.
Theriot, Mrs. J. Roy, 2135 S. Blvd.
*Thomas, Mrs. Charles, 4511 Rossmoyne.
Thorning, Mrs. W. B., 3603 Graustark.
Toland, Mrs. W. A., 4501 Caroline.
*Trible, Mrs. J. M., 2402 Calumet Dr.
Truitt, Mrs. J. J., 2619 Grant.
Tucker, Mrs. J. N., 1428 W. Alabama.
Turner, Mrs. B. W., 2947 Inwood Dr.
Turner, Mrs. C. G., 1601 S. Shepherd.
Turner, Mrs. J. H., 2521 Brentwood.
Tusa, Mrs. T. S., 1624 Richmond.
Tuttle, Mrs. L. L. D., 2223 Inwood Dr.
Vanzant, Mrs. T. J., 2233 MacGregor Dr.
Vaughan, Mrs. Luther M., 5015 Montrose Blvd.
*Waldron, Mrs. G. W. (Sec.), 436 Westmoreland.
Wallis, Mrs. Marshall, 2031 Sunset Blvd.
*Warner, Mrs. C. M. (Pres.), 2107 Ruth.
Warner, Mrs. L. M., 1633 W. Main.
Weeks, Mrs. J. W., Rosenberg, Texas.
Weil, Mrs. S. B., 2706 Rosedale.
Welsh, Mrs. H. C., 218 W. Main.
Whitsitt, Mrs. J. J., 3219 Crawford.
Wible, Mrs. D. J., 516 W. Bell.
Wilkerson, Mrs. E. A., 1505 McKinney.
Williams, Mrs. W. O., 516 Hathaway.
Wills, Mrs. Seward H., 5327 Mandell.
Wilson, Mrs. H. B., 1512 W. Alabama.
Wilson, Mrs. R. D., 2219 Pine Valley.
Wolf, Mrs. E. T., 4411 Fannin.
*Wootters, Mrs. J. H., 2119 Pine Valley.
York, Mrs. B. P., 2501 N. MacGregor Dr.
Young, Mrs. C. B., 3325 Del Monte Dr.
Youngblood, Mrs. J. C., 3011 Ella Lee Lane.
Zax, Mrs. Emile, 2301 Wentworth.

MONTGOMERY COUNTY AUXILIARY

Bartell, Mrs. Jack, Conroe.
Corrigan, Mrs. Joseph, Conroe.
Hailey, Mrs. Edwin (Pres.), Conroe.
Holland, Mrs. Wm., Conroe.
Ingrum, Mrs. W. P., Conroe.
Wilkins, Mrs. A. N., Conroe.

WALKER-MADISON COUNTIES AUXILIARY

Angier Mrs. E. L., Huntsville.
Anderson, Mrs. E. W., Huntsville.
Barnes, Mrs. Luther, Huntsville.
Barnes, Mrs. Sam, Trinity.
Black, Mrs. Ray, Huntsville.
Bush, Mrs. L. E., Huntsville.
Bush, Mrs. L. H., Huntsville.
Cole, Mrs. T. C., Huntsville.
Curtis, Mrs. M. E., Huntsville.
Garrett, Mrs. J. C., Huntsville.
Goodrich, Mrs. W. C., Huntsville.
Heath, Mrs. Jessie, Madisonville.
McKay, Mrs. J. A., Madisonville.
Morris, Mrs. J. E., Madisonville.
Robertson, Mrs. Harry, Madisonville.
Thomason, Mrs. J. W., Madisonville.
Thomason, Miss Elizabeth C., Madisonville.
Thornton, Mrs. H. H. (Pres.), Trinity.
Veazey, Mrs. W. B. (Sec.), Huntsville.

WASHINGTON COUNTY AUXILIARY

Becker, Mrs. A. E., Brenham.
Burnett, Mrs. M. D., Brenham.
Burns, Mrs. R. B., Giddings.
Enloe, Mrs., Sommerville.
Eversberg, Mrs. C. R., Brenham.
Hairston, Mrs. T. C., Brenham.
Harwell, Mrs. Claude, Brenham.
*Hasskarl, Mrs. R. A., Brenham.
Hasskarl, Mrs. W. F., Brenham.
Heincke, Miss Carolyn, Brenham.
Heincke, Mrs. Gus, Brenham.
Jarrell, Mrs. N. D., Sommerville.
Knolle, Mrs. Roger, Brenham.
Knolle, Mrs. Walde, Brenham.
Kusch, Mrs. L., Gay Hill.
Lenert, Mrs. R. H., Brenham.
Lusk, Mrs. Hugh, Brenham.
Miller, Mrs. A. C., Carmine.
*Pazdral, Mrs. G. V., Sommerville.
Schiller, Mrs. N. L., Brenham.
Schoenvogel, Mrs. O. F., Brenham.
Sinclair, Mrs. A. L., Burton.
*Southern, Mrs. C. E. (Pres.), Burton.
Stafford, Mrs. S. E., Brenham.
Steinbach, Mrs. H. L., Brenham.
Toubin, Mrs. S. H., Brenham.
Woolley, Mrs. T. O., Brenham.
Zeiss, Mrs. G. H., Brenham.

TENTH OR SOUTHEAST DISTRICT

Mrs. W. F. McCreight
Kirbyville
Council Woman

ANGELINA COUNTY AUXILIARY

Bledsoe, Mrs. R. B., Lufkin.
Burch, Mrs. J. S. (Pres.), Lufkin.
*Childers, Mrs. D. M., Lufkin.
Clark, Mrs. E. T., Lufkin.
Clement, Mrs. J. C., Diboll.
Clements, Mrs. P. C., Lufkin.
*Denman, Mrs. L. H., Lufkin.
Dillon, Mrs. O. M., Lufkin.
Estep, Mrs. M. A., Lufkin.
Gibson, Mrs. M. O., Lufkin.
Hawkins, Mrs. J. W., Lufkin.
Sweatland, Mrs. A. E., Lufkin.
Taylor, Mrs. Robert, Lufkin.
Taylor, Mrs. T. A., Lufkin.
Tinkle, Mrs. L. T., Lufkin.
Wade, Mrs. J. H., Lufkin.

JASPER-NEWTON COUNTY AUXILIARY

Damrel, Mrs. C. S., Call.
Gellatly, Mrs. Grace, Call.
Hardy, Mrs. W. H., Jasper.
Kelley, Mrs. W. R., Jasper.
Lazenby, Mrs. C. S., Kirbyville.
Lockey, Mrs. A. P., Bessmay.
*McCreight, Mrs. W. F. (Pres.), Kirbyville.
McGrath, Mrs. J. J., Jasper.
Richardson, Mrs. A. J., Jasper.
Seale, Mrs. J. N., Jasper.
Trotti, Mrs. D. O., Newton.
Worthey, Mrs. W. R. (Sec.), Call.

JEFFERSON COUNTY AUXILIARY

Alexander, Mrs. H. E., 2570 Harrison, Beaumont.
Allison, Mrs. F. Peel, San Jacinto Bldg., Beaumont.
Autrey, Mrs. A. R., 3100 Fifth St., Port Arthur.
Barr, Mrs. R. E., 1415 Calder, Beaumont.
Bevil, Mrs. J. G., 2475 Broadway, Beaumont.
*Bevil, Mrs. Jno. R., 2580 North, Beaumont.
Beyt, Mrs. F. J. (Sec.), 3812 Lakeshore Dr., Port Arthur.
Boring, Mrs. C. W., 3929 3rd St., Port Arthur.
Brandau, Mrs. W. H., 2449 Harrison, Beaumont.
Broussard, Mrs. J. A., 3449 5th St., Port Arthur.
*Brown, Mrs. Walter D., 2274 North St., Beaumont.
*Bybee, Mrs. J. A., 2425 Pecos Blvd., Beaumont.
Carter, Mrs. J. H., 2636 Liberty, Beaumont.
*Chambers, Mrs. B. F., 449 5th Ave., Port Arthur.
Chunn, Mrs. D. D., La Salle Hotel, Beaumont.
Colby, Mrs. Fred, 2380 Hazel, Beaumont.
Crager, Mrs. J. C., 2490 North, Beaumont.
Cunningham, Mrs. Michael, 2485 Calder, Beaumont.
Eisenstadt, Mrs. H. B., 3839 4th St., Port Arthur.
English, Mrs. Dudley M., 2315 Calder, Beaumont.
*Ferguson, Mrs. Edw. C., 2201 Victoria, Beaumont.
Fett, Mrs. B. J., Port Arthur.
Gardner, Mrs. Jno., 2534 Long, Beaumont.
*Graber, Mrs. W. J., 2575 Calder, Beaumont.
Greenberg, Mrs. P. B., 2398 Laurel, Beaumont.
Harlan, Mrs. H. D., 2460 Long, Beaumont.
Heare, Mrs. L. C., 3400 Sixth St., Port Arthur.
*Hendry, Mrs. C. H., 2494 Hazel, Beaumont.
*Hosen, Mrs. Harris, 3305 Thomas Blvd., Port Arthur.
Jones, Mrs. E. C., 3541 Broadway, Beaumont.
Ledbetter, Mrs. L. H., 820 21st St., Beaumont.
*Lewis, Mrs. S. J., Calder Terrace, Beaumont.
Lindsey, Eugene, Calder Pl., Beaumont.
Long, Mrs. J. W., 102 Dryden Pl., Port Arthur.
Makins, Mrs. Jas., 3000 Bernhardt, Port Arthur.
Mann, Mrs. D. A., 2135 Victoria, Beaumont.
Middleton, Mrs. W. C., 1675 Orange, Beaumont.
Mixson, Mrs. H. J., 2454 South, Beaumont.
Pace, Mrs. B. F., Nederland.
Painton, Mrs. C. E., 3303 Ninth St., Port Arthur.
Pecora, Mrs. T. L., 2351 Angelina, Beaumont.
Powell, Mrs. L. C., 250 Washington Blvd., Beaumont.
Pruit, Mrs. L. T., 1415 Calder, Beaumont.
Raines, Mrs. J. M., 3348 Eighth St., Port Arthur.
Robertson, Mrs. E. R., 2545 Long, Beaumont.
Serafino, Mrs. L. C., 1303 College, Beaumont.
Shaddock, Mrs. C. B., 2171 Broadway, Beaumont.
Smith, Mrs. Jno. M., Port Neches.
*Smith, Mrs. W. A., Caldwood, Beaumont.
Solis, Mrs. G. R., 2290 North, Beaumont.
Stephenson, Mrs. G. Bruce, 2525 Broadway, Beaumont.
Stoltje, Mrs. Joe, Nederland.
Suehs, Mrs. M. E., 2209 Calder, Beaumont.
Swonger, Mrs. J. B., 2205 Hazel, Beaumont.
Tatum, Mrs. W. E., 2180 Orange, Beaumont.
Thompson, Mrs. J. D. (Dist. Pres.), 3541 Fifth St., Port Arthur.
Todd, Mrs. C. H., Jr., 2450 Calder, Beaumont.
Tumbleson, Mrs. T. A., 2100 North, Beaumont.
Vaughan, Mrs. Ben H., 2121 Lakeshore Dr., Port Arthur.
Wallace, Mrs. W. G., 2572 McFaddin, Beaumont.
Weir, Mrs. D. S., 1415 Calder, Beaumont.
White, Mrs. Clarence N., 2223 Neches, Beaumont.
Williford, Mrs. H. B., 2565 Hazel, Beaumont.
*Wilson, Mrs. I. G., Calder Place, Beaumont.
*Young, Mrs. I. T. (Pres.), 3748 Proctor, Port Arthur.

LIBERTY-CHAMBERS COUNTY AUXILIARY

*Bellamy, Mrs. R. C. (Pres.), Daisetta.
Bevil, Mrs. Jack, Hull.
Bridges, Mrs. W. H., Mt. Belvieu.
Delaney, Mrs. A. L., Liberty.
*Fahring, Mrs. Geo. (Sec.), Anahuac.
Leggett, Mrs. Walter, Cleveland.
Richter, Mrs. E. R., Dayton.
Shearer, Mrs. A. R., Mt. Belvieu.

NACOGDOCHES COUNTY AUXILIARY

Barham, Mrs. G. S., Nacogdoches.
*Beall, Mrs. J. Frank (Sec.), Nacogdoches.
Blackwell, Mrs. T. J., Nacogdoches.
Campbell, Mrs. G. P., Nacogdoches.
Middlebrook, Mrs. G. F., Nacogdoches.
McKinney, Mrs. Edgar P., Nacogdoches.
Nelson, Mrs. A. A., Nacogdoches.
Nelson, Mrs. A. L., Nacogdoches.
Neuville, Mrs. Carroll (Pres.), Nacogdoches.
Payne, Mrs. C. W., Camp Worth.
Pennington, Mrs. T. J., Nacogdoches.
Smith, Mrs. C. T., Nacogdoches.
Tucker, Mrs. Felix R., Nacogdoches.
Tucker, Mrs. Henry, Nacogdoches.
Tucker, Mrs. S. B., Nacogdoches.

ELEVENTH OR EASTERN DISTRICT

Mrs. J. K. Webster
Athens
Council Woman

ANDERSON-HOUSTON-LEON COUNTIES AUXILIARY

Barclay, Mrs. Sam (Sec.), Crockett.
Bing, Mrs. Roland, Oakwood.
Butler, Mrs. C. W., Crockett.
Dean, Mrs. John L., Jr., Crockett.
Kennedy, Mrs. Sam, Grapeland.
Powell, Mrs. E. P., Centerville.
*Stokes, Mrs. Paul (Pres.), Crockett.
Wieneke, Mrs. Harris, Lovelady.
Wootters, Mrs. J. S., Crockett.

CHEROKEE COUNTY AUXILIARY

Auerbach, Mrs. S. H., Jacksonville.
Bone, Mrs. J. N., Jacksonville.
Burnett, Mrs. E. W., Rusk.
Cobble, Mrs. T. H. (Sec.), Rusk.
Evans, Mrs. C. W., Fastrill.
Fuller, Mrs. Fred A., Jacksonville.
Haynes, Mrs. Elmer, Rusk.
Johnson, Mrs. J. F., Rusk.
Lamb, Mrs. Marvin, Jacksonville.
McDaniel, Mrs. I. H., Alto.
*McDonald, Mrs. W. A., Alto.
McDougle, Mrs. J. B., Forest.
Priest, Mrs. R. C., Rusk.
Ramsey, Mrs. J. B., Forest.
Rowell, Mrs. R. C., Rusk.
Scarborough, Mrs. J. S., Rusk.
Shaw, Mrs. C. A., Rusk.
*Smith, Mrs. Lawrence, Rusk.
*Sory, Mrs. W. H., Jacksonville.
Stripling, Mrs. C. H., Jacksonville.
*Travis, Mrs. J. M., Jacksonville.
Travis, Mrs. L. L., Jacksonville.
Wheeler, Mrs. M. S. (Pres.), Rusk.

HENDERSON COUNTY AUXILIARY

Baugh, Mrs. J. F., Chandler.
Black, Mrs. W. T., Athens.
Cockrell, Mrs. L. L., Athens.
*Easterling, Mrs. A. H., Athens.
Geddie, Mrs. N. D., Athens.
Henderson, Mrs. R. E., Athens.
*Hodge, Mrs. R. H. (Pres.), 710 E. Tyler St., Athens.
*Love, Mrs. W. R., Athens.
Smith, Mrs. W. B., Athens.
Todd, Mrs. Travis, Athens.
*Wallace, Mrs. B. C. (Sec.), 207 S. Palestine St., Athens.
*Webster, Mrs. J. K., Athens.
*Weekly, Mrs. C. M., Athens.

SMITH COUNTY AUXILIARY†

Bailey, Mrs. W. M.
Bell, Mrs. G. G.
Brown, Mrs. Glynn.
Brown, Mrs. Irving.
Bryant, Mrs. Howard (Sec.), 832 College Ave. S.
Clawater, Mrs. E. W.
Cupp, Mrs. C. D.
Faust, Mrs. J. J.
Golfeder, Mrs. J.
Griffiths, Mrs. J. M. (Deceased).
Jarmon, Mrs. T. M.
McDonald, Mrs. C. C.
Page, Mrs. R. L.
Pope, Mrs. Irvin, Jr. (Pres.), 423 Vine St.
Pope, Mrs. John H.
Rice, Mrs. E. D.
Shirley, Mrs. Clayton.
*Willingham, Mrs. C. E. (Dist. Pres.).
Windham, Mrs. L. B.
*Woldert, Mrs. Albert.

TWELFTH OR CENTRAL DISTRICT

Mrs. Evelyn Rice Hutchins
Marlin
Council Woman

BELL COUNTY AUXILIARY‡

Alsup, Mrs. A. H.
Anderson, Mrs. H. B.
Baird, Mrs. L. W.
Bassel, Mrs. Paul M., Belton, Texas.
Bradfield, Mrs. E. O.
*Brindley, Mrs. G. V.
*Chernosky, Mrs. W. A.
Crumpler, Mrs. P. C.
*Curtis, Mrs. R. C.
Curtis, Mrs. R. R.
Donnelley, Mrs. V. J.
Ellis, Mrs. I. D., Troy, Texas.
*Greenwood, Mrs. J. H.
Hammond, Mrs. F. M.
Harlan, Mrs. R. K.
Howell, Mrs. F. W.
Kilman, Mrs. J. R.
Knight, Mrs. Lee.
*Leake, Mrs. Barton.
Longmire, Mrs. V. M.
Maxwell, Mrs. W. J.
McCelvey, Mrs. J. S.
*Moon, Mrs. A. E.

†Address is Tyler unless otherwise stated.
‡Address is Temple unless otherwise stated.

Noble, Mrs. R. W.
Owers, Mrs. Albert.
Phillips, Mrs. Charles (Sec.), 606 N. 9th.
Pollok, Mrs. L. W.
Ramey, Mrs. Paul.
*Robinson, Mrs. J. E.
*Rodarte, Mrs. J. G.
Scott, Mrs. A. C., Sr.
Scott, Mrs. A. C., Jr.
*Sherwood, Mrs. M. W.
Speed, Mrs. Terrell.
Stevenson, Mrs. C. A.
Talley, Mrs. L. R.
*Wallace, Mrs. B. C., Jr.
White, Mrs. R. R.
*Wiedeman, Mrs. A. E. (Pres.), 1504 N. 7th St.
Winston, Mrs. J. R.
Wolf, Mrs. A. Ford.
Woodson, Mrs. Burbank.
*Woodson, Mrs. Palmer.

BRAZOS-ROBERTSON COUNTY AUXILIARY

Boguski, Mrs. W. M. (Pres.), Hearne.
Cline, Mrs W. B., Bryan.
Cummings, Mrs. H. W., Hearne.
Dodd, Mrs. T. E. (Sec.), Bryan.
Ehlinger, Mrs. R. B., Bryan.
Grant, Mrs. R. B., Bryan.
*Harrison, Mrs. R. H., Bryan.
Holloman, Mrs. J. C., Franklin.
Marsh, Mrs. J. E., College Station.
Parker, Mrs. W. S., Calvert.
Perry, Mrs. J. S., Bryan.
*Richardson, Mrs. S. C., Bryan.
*Searcy, Mrs. R. M., Bryan.
Slaughter, Mrs. S. B., Bryan.
Taylor, Mrs. W. C., Calvert.
Walton, Mrs. T. T., Bryan.
Wilkerson, Mrs. L. O., Bryan.
Woodard, Mrs. P. A., Bryan.

FALLS COUNTY AUXILIARY†

Barnett, Mrs. John B.
*Barnett, Mrs. John Huston.
Bennett, Mrs. A. C.
Buie, Mrs. N. D.
Collier, Mrs. J. I.
*Davison, Mrs. M. A.
Garrett, Mrs. H. S.
Glass, Mrs. Thomas G.
Hampshire, Mrs. G. H.
Hornbeck, Mrs. A. C. (Dist. Pres.).
Hutchings, Mrs. E. P.
*Hutchins, Mrs. Evelyn Rice (Pres.).
Shaw, Mrs. F. W.
*Smith, Mrs. W. S. (Sec.).
*Smith, Mrs. Howard O.
*Torbett, Mrs. John Walter, Sr.
*Torbett, Mrs. John W., Jr.
Von Toble, Mrs. A. E.

JOHNSON COUNTY AUXILIARY

Dennis, Mrs. Mills, Cleburne.
*Harris, Mrs. R. L. (Deceased), Cleburne.
Honea, Mrs. T. C., Cleburne.
Jowell, Mrs. C. C. (Pres.), Cleburne.
*Kimbro, Mrs. R. W. (Sec.), Cleburne.
Knox, Mrs. M. T., Cleburne.
*Pickens, Mrs. J. W., Cleburne.
Rudd, Mrs. L. H., Burleson.
Turner, Mrs. B. H. (Deceased), Cleburne.
*Yater, Mrs. T. F., Cleburne.

DENTISTS' WIVES

Campbell, Mrs. J. W., Alvarado.
Curtis, Mrs. J. E., Cleburne.
Morgan, Mrs. O. N., Cleburne.
Wansley, Mrs. R. A., Cleburne.

McLENNAN COUNTY AUXILIARY‡

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*Aynesworth, Mrs. Brian, 436 Rice.
Aynesworth, Mrs. H. T., 3000 Cumberland.
Aynesworth, Mrs. K. H., 415 Mt. Lookout.
Bidelspach, Mrs. W. C., 1815 Colonial.
*Bradford, Mrs. J. D., Mart, Texas.
Brannon, Mrs. E. C., Mt. Vernon Pl.
*Brooks, Mrs. C. H., 2300 Bosque.
Bullard, Mrs. R. E., 2616 Fort.
*Burgess, Mrs. John L., 2411 Austin.
*Cannon, Mrs. I. F., Mart, Texas.
Carlisle, Mrs. M. C., 1410 Austin.
*Cason, Mrs. J. F., 1202 N. 18th.
Catto, Mrs. C. G., 1014 N. 19th.
Coffelt, Mrs. R. L., 423 N. 23rd.
*Crosthwait, Mrs. W. L., 1104 N. 18th.
*Dudgeon, Mrs. H. R., Sr., 2200 Gorman.
*Dudgeon, Mrs. Howard R., Jr. (Pres.), 2017 Columbus.
Germany, Mrs. H. T., 2324 Bosque.
*Goodall, Mrs. C. L., 2600 Colcord.
Goodall, Mrs. Van Doren, Clifton, Texas.
Goodman, Mrs. Aubrey, 2911 Homan.
Hale, Mrs. J. W., 1520 Washington.
Jenkins, Mrs. I. W., 2208 Gorman.
Johnson, Mrs. E. A., 628 Baker Lane.
Kee, Mrs. J. L., 1819 Morrow.
*Kirby, Mrs. F. F., 2801 Sanger.
Klatt, Mrs. W. W., 1608 N. 16th.
Lidell, Mrs. G. M., 2800 Maple.
*Manske, Mrs. A. O., 3601 Gorman.
Murphy, Mrs. Paul, 3100 Maple.
Oliver, Mrs. T. M., 1612 Proctor.
Plueneke, Mrs. P. C., 1525 Pine.
Rayburn, Mrs. C. E., 2601 Fort.
Reese, Mrs. C. H., 2400 Fort.
Reese, Mrs. Walter, Sr., 1616 N. 5th.
Siler, Mrs. Ivey Wood, 2004 Columbus.
Simpson, Mrs. J. W., 2901 Lasker.
Simpson, Mrs. Neill, 1617 Proctor.
Smith, Mrs. Ed, 1226 Herring.
*Souther, Mrs. W. L., 2005 N. 7th.
Spencer, Mrs. S. C., 419 N. 23rd.
Traylor, Mrs. C. J., 1809 Algonquin.
Trice, Mrs. W. G., 414 N. 23rd.
*Warren, Mrs. D. D., 1322 Washington.
Wedemeyer, Mrs. E. L., 1304 N. 5th.
Wells, Mrs. Howard, 3600 Grim.
Witcher, Mrs. S. L., Clifton, Texas.
Witte, Mrs. W. S., 2005 Austin.
*Wood, Mrs. W. A., 3100 Morrow.
*Woolsey, Mrs. H. U., 400 Rice.
Woolsey, Mrs. W. J., 2005 Austin.

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*Barkley, Mrs. T. S., Rockdale.
*Brindley, Mrs. C. G., Cameron.
Denson, Mrs. Leland, Cameron.
Rischer, Miss Rose, Cameron.
Sessions, Mrs. I. P., Rockdale.

THIRTEENTH OR NORTHWESTERN DISTRICT

Mrs. O. L. Borchardt
Vernon
Council Woman

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*Edwards, Mrs. T. S., Knox City.
Eiland, Mrs. D. C. (Sec.), Munday.
Emery, Mrs. O. J., Rule.
Foy, Mrs. J. W. (Pres.), Seymour.
Frizzell, Mrs. T. P., Knox City.
Hudson, Mrs. Ike, Stamford.
Scott, Mrs. Frank C., Haskell.
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*Anderson, Mrs. R. B., 4109 El Campo.
Andujar, Mrs. J. J., 2951 Benbrook Blvd.
*Anthony, Mrs. Earnest E. (Sec.), 2705 Wabash Ave.
*Antweil, Mrs. A., 2217 Fairmount Ave.
*Armstrong, Mrs. Frank, 2432 Medford Court East.
Baker, Mrs. Robert G., 4057 Mattison Ave.
Ball, Mrs. Bert, 3229 Lipscomb Ave.
*Barcus, Mrs. W. S., 2020 Hillcrest.
Barker, Mrs. Bob, Jr., 24 Valley Ridge Road.
Barrett, Mrs. I. P., 3819 Race Street.
Beall, Mrs. Frank C., 1420 N. Ballinger.
Beall, Mrs. K. H., 1600 Sunset Terrace.
Beaton, Mrs. Hugh, 5630 Collinwood.
Beavers, Mrs. G. Herbert, 5021 Bryce.
Bennett, Mrs. Jerrell, 3501 Bellaire Drive.
*Bond, Mrs. Tom B., Lake Worth.
Borough, Mrs. L. D., 1101 N. Sylvania.
Bozeman, Mrs. J. D., 1210 Lilac.
Brasher, Mrs. Ray V., 716 W. Cantey.
Brewer, Mrs. J. W., 3133 Ryan.
Brewster, Mrs. Burke, 2547 Greene.
Brown, Mrs. J. Hyal, 3104 Wabash.
*Brown, Mrs. W. Porter, 2515 S. Adams.
Campbell, Mrs. J. F., 2704 Scott.
*Chambers, Mrs. J. O., 2224 Western.
Cheatham, Mrs. T. H., 2124 Park Place.
Clayton, Mrs. Charles F., 2329 Mistletoe Ave.
Cochran, Mrs. J. R., 3013 Merida St.
Coffey, Mrs. Alden E., 4117 W. Seventh.
Covert, Mrs. J. D., 1508 Hemphill.
*Crabb, Mrs. M. H., 2711 University Dr.
Cross, Mrs. T. J., 2424 Lofton Terrace.
Davis, Mrs. Edwin, 1320 Washington.
Davis, Mrs. Haywood, 3908 West Fourth.
Day, Mrs. Giles W., 3932 Modlin.
Deaton, Mrs. Hobart O., 1221 Clara St.
Duringer, Mrs. W. A., 1402 Summit Ave.
Duringer, Mrs. W. C., 2508 Ryan Place.
Enloe, Mrs. George R., 3105 Stadium Dr.
Eschenbrenner, Mrs. John, 3600 Country Club Circle.
Flickwir, Mrs. A. H., 1732 Ashland.
Francis, Mrs. Fred W., 2614 Kensington.
Funk, Mrs. T. H., 3621 Park Hill Drive.
Furman, Mrs. Jack, Jr., 2318 Harrison.
Garnett, Mrs. John W., Jr., 3137 Cockrell.
Garrett, Mrs. C. C., 4800 Byers.
Givens, Mrs. J. M., 127 W. Broadway.
Godley, Mrs. L. O., 2129 Park Place.
*Goodman, Mrs. T. L., 1933 Forest Park Blvd.
Gough, Mrs. R. H., 2211 Pembroke Dr.
Grammer, Mrs. J. H., 3628 Potomac.
Griffith, Mrs. M. A., 2110 Roosevelt.
Grogan, Mrs. O. R., 3200 Avondale.
Grogan, Mrs. R. L., 1908 Forest Pk. Blvd.
Hall, Mrs. E. P., Sr., 2233 Hemphill.
Halpin, Mrs. Frank W., 5109 Bryce.
Harper, Mrs. Henry W., Jr., 2741 Fifth Ave.
*Harris, Mrs. Earl, 2005 Warner Road.
Havard, Mrs. C. A., 923 Pennsylvania.
Hawkins, Mrs. C. Pearre, 4004 Hampshire Blvd.
Herndon, Mrs. G. Cole, 3901 Ryan St.
Hewatt, Mrs. J. W., 1316 Annis.
Hiett, Mrs. Carey, 1462 Virginia Place.
Hook, Mrs. Jas. H., 3917 Potomac.
Horn, Mrs. J. Morris, 1000 College.
*Horn, Mrs. Will S., 2217 Winton Terrace West.
Howard, Mrs. E. L., Birdville Road.
*Howard, Mrs. Rex, 3125 Wabash.
Huffman, Mrs. A. M., 920 Drew.
Hulsey, Mrs. Sim, 2541 Stadium Dr.
*Hyde, Mrs. X. R., 2533 Cockrell.
Jackson, Mrs. A. E., Forest Hills.
Jackson, Mrs. H. T., 3812 Harley St.
*Jagoda, Mrs. Samuel, 2215 Mistletoe Ave.
*Jeter, Mrs. T. M., 2608 S. Jennings.
*Kibbie, Mrs. H. K., 2309 Medford Court East.
*Kibbie, Mrs. K. V., 715 W. Leuda.
Kramer, Mrs. J. T., 3613 Marigold.
*Lackey, Mrs. W. C., 2304 Medford Court East.
Lacy, Mrs. G. W., 3305 Ave. G.
*Ladd, Mrs. A. D., 1109 S. Henderson.
Lees, Mrs. C. R., Route 2, Box 82K.
*Littlepage, Mrs. H. B., 814 W. Terrell.
Lorimer, Mrs. W. S., 2240 Winton Terrace West.
Lyle, Mrs. J. M., 2421 Stadium Dr.
*Matheson, Mrs. D. N., 2500 Cockrell.
Mullins, Mrs. F. M., 1424 Cooper.
McCollum, Mrs. C. H., Sr., 2806 Sixth Ave.
McCollum, Mrs. C. H., Jr., 2733 Lubbock.
McKean, Mrs. R. W., 2705 Travis.
McKee, Mrs. Frank, 2300 Avalon Court.
*McVeigh, Mrs. Jos. F. (Pres.), 4725 Washburn.
Mitchell, Mrs. Gatlin, 4709 Crestline Rd.
Morris, Mrs. A. J., 2529 Honeysuckle.
*Munter, Mrs. Craig, 3811 Potomac.
*O'Bannon, Mrs. R. P., 2135 Warner Rd.
Ossenfort, Mrs. W. F., U. S. Public Health Hospital.
Ott, Mrs. W. O., 1019 West Terrell.
*Parson, Mrs. W. F., Blackstone Hotel.
Pescor, Mrs. Michael J., U. S. Public Health Hospital.
*Phillips, Mrs. W. G., 3115 Race.
Powell, Mrs. E. V., 2028 Huntington Lane.
Price, Mrs. S. A., 2505 Sixth Ave.
*Pumphrey, Mrs. A. B., Route 3, White Settlement Rd.
Rathgeber, Mrs. Van D., 2311 Harrison.
Richardson, Mrs. J. J., 2916 Travis.
Roberts, Mrs. A. L., 1818 Eighth Ave.
*Robertson, Mrs. J. A., 3004 Ryan Ave.
Rogers, Mrs. E. D., 2130 Warner Rd.
Rogers, Mrs. T. G., Decatur, Texas.
*Rumph, Mrs. D. M., 1521 Grand.
Rumph, Mrs. Mal, 1940 Forest Park Blvd.

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‡Address is Waco unless otherwise stated.

†Address is Fort Worth unless otherwise stated.

Rumph, Mrs. T. G., 2101 Pembroke Dr.
*Schenck, Mrs. C. P., 3117 Stadium Dr.
Schoonover, Mrs. F. S., 600 Eighth Ave.
Schwartz, Mrs. E. G., 2420 Shirley.
Shelley, Mrs. Harold J., 4071 Modlin.
Siddons, Mrs. G. Y., 1900 Fairmount.
Smith, Mrs. F. P., 5100 Collinwood.
Snyder, Mrs. F. L., Rt. 5, Old Benbrook Rd.
Spivey, Mrs. J. L., 2314 W. Rosedale.
Steger, Mrs. J. H., 3009 Hemphill.
Stout, Mrs. Sidney, 2126 Stanley.
Tatum, Mrs. W. C., 1828 Hill Crest.
*Taylor, Mrs. Holman, 2205 Sixth Ave.
Terrell, Mrs. C. E., 2618 Waits Ave.
Terrell, Mrs. C. O., Jr., 2828 Willing.
*Terrell, Mrs. Caleb, 2621 Waits Ave.
*Terrell, Mrs. T. C., 2401 Stadium.
Thomas, Mrs. H. C., 1301 Clover Lane.
Thomason, Mrs. T. H., 4451 Crestline Rd.
*Thompson, Mrs. W. R., 2306 Sixth Ave.
Touzel, Mrs. C. S. E., 1326 Summit Ave.
*Trigg, Mrs. Henry, Westover Hills.
Walker, Mrs. Webb, 2420 College.
*Waltrip, Mrs. P. M., Jr., 3304 Cockrell.
Webb, Mrs. William S., 1209 Thomas Pl.
Weir, Mrs. E. M., 3321 Park Ridge.
*Wise, Mrs. J. R., 3008 Greene.
Withers, Mrs. I. A., 3000 Gambrell.
*Woodward, Mrs. C. S., Home for the Aged Masons.
*Woodward, Mrs. S. A., 1401 Cooper.

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Atkinson, Mrs. Curtis, 1302 Polk.
Beckman, Mrs. M. A., 1508 Buchanan.
Bishop, Mrs. W. A., 1201 Brook.
Brown, Mrs. C. H., State Hospital.
Caskey, Mrs. M. W. (Sec.), 2102 Brown.
Clark, Mrs. G. G., Iowa Park, Texas.
Collard, Mrs. F. R., 2414 Ninth.
Dailey, Mrs. Robert, 2007 Collins.
*Dorbandt, Mrs. B. W. (Pres.), State Hospital.
Egdorf, Mrs. Otto C., 2213 Clarinda.
Glover, Mrs. M. H., 2700 Tenth.
Guest, Mrs. J. C. A., 1801 Eleventh.
Hall, Mrs. J. D., 1723 Elizabeth.
Hanretta, Mrs. A. T., State Hospital.
Hargrave, Mrs. R. L., 1824 Huff.
Hartsook, Mrs. C. R., 2715 Ninth.
*Heyman, Mrs. J. A., 2113 Milby.
Hilburn, Mrs. R. E., 1510 Polk.
Holland, Mrs. L. B., 1655 Pearl.
Johnson, Mrs. J. A., 1002 Grace.
*Jones, Mrs. E. F., Kemp.
Kanatser, Mrs. J. E., 2103 Miramar.
*Kiel, Mrs. O. B., 2104 Miramar.
*Kimbrough, Mrs. O. T., 1920 Victory.
Knox, Mrs. Roland, William-Mary Hotel.
Landon, Mrs. F. R., 1901 Hays.
*Leach, Mrs. A. F., 1503 Hayes.
*Ledford, Mrs. H. P., 3212 Beech.
*Lee, Mrs. Q. B., 1718 Huff.
Little, Mrs. J. A., 2107 Berkley.
Lowry, Mrs. W. P., 300 Morningside Dr.
Mangum, Mrs. Carl E., 2901 Taft.
Masters, Mrs. W. J., 1603 Hayes.
*Monroe, Mrs. C. W., Electra, Texas.
*Nail, Mrs. J. B., 2023 Berkley.
Parnell Mrs. L. D., 1508 Tilden.
Pattillo, Mrs. A. D., State Hospital.
Pierce, Mrs. A. W., 1610 Garfield.
Powers, Mrs. W. L., 1706 8th St.
Prichard, Mrs. H. D., 3715 Kessler.
Reagan, Mrs. J. R., 2906 Speedway.
Rosenblatt, Mrs. Wm., 126 Pembroke Lane.
Russell, Mrs. I. D., 211 Ave. C., Burkburnett, Texas.
Seibold, Mrs. G. J., 1710 Huff.
Singleton, Mrs. G. T., 2031 Avondale.
Smith, Mrs. P. K., 2110 Wenonah.
Venable, Mrs. D. R., 2010 Garfield.
Whiting, Mrs. W. B., 2175 Ave. I.
Wilson, Mrs. O. W., 1006 Brook.

FOURTEENTH OR NORTHERN DISTRICT

Mrs. Wm. Thomas
Terrell
Council Woman

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Griffin, Mrs. O. P., Gainesville.
Hawk, Mrs. H. P., Gainesville.
*Higgins, Mrs. D. M. (Pres.), Gainesville.
Kuser, Mrs. L. W., Gainesville.
Mead, Mrs. E. C., Gainesville.
Myrick, Mrs. Thomas, Muenster.
Rice, Mrs. L. R., Gainesville.
*Thayer, Mrs. C. B., Gainesville.
*Thomas, Mrs. I. L. (Sec.), Gainesville.
*Whiddon, Mrs. R. C., Gainesville.
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Alexander, Mrs. J. C., Stoneleigh Court.
*Allday, Mrs. L. E., 3434 Westminster.
*Allen, Mrs. B. W., 4647 Ridgedale.
*Allison, Mrs. W. J., 6948 Lakeshore.
Arnold, Mrs. L. E., 3744 Green.
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*Aten, Mrs. Eugene, 3612 Herschel.
*Austin, Mrs. Dale, 4605 Bowser.
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Barton, Mrs. R. M., 4513 Beverly Dr.
*Beaver, Mrs. N. B., 4329 Fairfax.
*Beall, Mrs. J. R., 3304 Beverly Dr.
*Bell, Mrs. M. D., 6347 Tremont.
Berger, Mrs. B. J., 3916 Stonebridge Dr.
*Black, Mrs. J. H., 3624 Princeton.
Blailock, Mrs. M. B., 5210 Gaston.
*Bland, Mrs. L. F., 4621 Munger.
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*Block, Mrs. Harold M., 4312 Fairfax.
*Bourland, Mrs. J. W., 4902 Swiss.
*Bourland, Mrs. J. W., Jr., 4549 Belfort.
*Bradford, Mrs. W. H., 3706 Holland.
*Brannin, Mrs. Dan, Averill Way, Preston Downs.
Brannin, Mrs. Edward B., 5100 Junius.
*Brau, Mrs. J. G., 4034½ Hawthorne.
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*Browne, Mrs. W. C., 705 Marsalis.
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*Buchanan, Mrs. J. Forest, 4001 Druid Lane.
*Buford, Mrs. B. R., 4633 Mockingbird Lane.
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*Bush, Mrs. D. M., 3625 Hanover.
*Butte, Mrs. Felix, 3806 Stratford.
*Bywaters, Mrs. T. W., Halls Rd.
*Caillet, Mrs. O. Rene, 4902 Lovers Lane.
Cairns, Mrs. A. B., 4239 Lovers Lane.
*Carlisle, Mrs. C. P., Jefferson Hotel.
*Carlson, Mrs. G. D., 8608 Inwood Rd.
*Carman, Mrs. H. F., 6028 Preston Rd.
Carpenter, Mrs. R. G., 1203 N. Madison.
*Carrell, Mrs. Branden, 4429 Belclaire.
*Carrell, Mrs. W. B., 3612 Overbrook.
Carswell, Mrs. W. E., 6722 Lakeshore Dr.
Carter, Mrs. C. B., Dallas Country Club.
*Carter, Mrs. C. F., 4545 Bordeaux.
*Carter, Mrs. E. L., 6660 Lakeshore Dr.
*Cary, Mrs. E. H., 4712 Lakeside Dr.
*Cheavens, Mrs. T. H., Orphans Home Rd.
Cinnamon, Mrs. A. M., 6938 Casa Loma.
*Clark, Mrs. Harold G., 3540 Milton.
*Coble, Mrs. J. M., 2504 Maple.
*Cochran, Mrs. H. Walton, 3308 St. John's Dr.
*Collier, Mrs. Gates, 2319 N. Fitzhugh.
Cookerly, Mrs. Van, 4512 Southern.
*Copeland, Mrs. F. R., 3506 Springbrook.
Cowart, Mrs. Robert W., 4313 Worth.
*Crutcher, Mrs. H. K., 1606 Junior Dr.
Daniel, Mrs. R. H., Duncanville, Texas.
*Dathe, Mrs. Richard, 4155 Wycliff.
Davis, Mrs. David B., 1832 S. Blvd.
Dawson, Mrs. J. L., 4411 Vandelia.
*Dean, Mrs. J. H., 3412 St. John's Dr.
*Deatherage, Mrs. William, 4517 Reiger.
*Deatherage, Mrs. W. R., 5141 Goodwin.
Decherd, Mrs. H. B., 3708 Hawlins.
Denton, Mrs. Guy T., 1002 N. Edgefield.
*Denton, Mrs. Guy T., Jr., 2519 Marvin.
D'Errico, Mrs. Albert, Seneca Dr.
*Dickey, Mrs. E. V., 4410 Junius.
*Donald, Mrs. Homer, 1545 W. Colorado.
*Dorman, Mrs. J. H., 4309 Avondale.
*Dozier, Mrs. F. S., 4225 Bryn Mawr.
*Duckett, Mrs. J. W., 3308 Dartmouth.
Duncan, Mrs. H. E., 1150 N. Windomere.
*Dunlap, Mrs. Elbert, 3712 Lemmon.
*Dunstan, Mrs. E. M., 5119 Live Oak.
*Edwards, Mrs. W. L., 2014 Euclid.
*Embree, Mrs. J. W., 4218 Fairfax.
*Evans, Mrs. W. G., 4026 Herschel.
*Fowler, Mrs. W. W., 4530 Munger.
*Fox, Mrs. Everett C., 4022 Stonebridge Dr.
*Franklin, Mrs. F. S., 4629 Southern.
Franklow, Mrs. C. D., Baker Hotel.
*Freedman, Mrs. S. M., Maple Terrace.
*Fry, Mrs. M. D., 6225 Lakewood Blvd.
*Galt, Mrs. Sidney, 4052 Hawthorne.
*Gauldin, Mrs. R. J., 636 Second Ave.
*Gessner, Mrs. F. E., 5331 Morningside.
*Gibbons, Mrs. O. W., 4329 Lorraine.
*Gilbert, Mrs. T. C., Cliff Towers.
*Giles, Mrs. R. B., 3900 Potomac.
*Glass, Mrs. R. J., 716 Lipscomb.
*Goff, Mrs. G. F., 4211 Lakeside.
*Goforth, Mrs. J. L., 6907 Westlake.
Goggans, Mrs. Roy, Woodlawn Hospital.
Goode, Mrs. J. V., 4410 Normandy.
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Green, Mrs. Tom, 2403 Catherine.
Greet, Mrs. B. E., 206 W. Tenth.
*Grow, Mrs. M. H., 4141 Glenwick Lane.
*Hacker, Mrs. Guy L., 5711 Goliad.
*Hackney, Mrs. U. P., 5703 Vanderbilt.
Haley, Mrs. W. E., 4720 St. John's Dr.
*Hamilton, Mrs. L. E., 4124 Stanford.
*Hampton, Mrs. J. A., 5446 Mercedes.
Hannah, Mrs. C. R., 3921 Potomac.
Harder, Mrs. I. E., Rt. 7, Park Lane.
Hardin, Mrs. A. D., 5220 Live Oak.
*Hardin, Mrs. Dexter, 3616 Overbrook.
*Harrington, Mrs. S. F., 3722 Cragmont.
Harris, Mrs. N. J., 4538 Roland.
Harrison, Mrs. Ben, 1317 North Beckley.
Hawkins, Mrs. H. L., 1400 Kessler Parkway.
*Hawley, Mrs. J. L., 4141 Glenwick Lane.
*Herndon, Mrs. James, 4053 Amherst.
*Hill, Mrs. J. M., 5610 Matalee.
*Hill, Mrs. S. M., 3617 Lexington.
*Hilliard, Mrs. G. M., 4217 Rawlins.
*Hodges, Mrs. J. S., 708 Nesbit.
Holyz, Mrs. H. E., 3213 Lovers Lane.
Howard, Mrs. G. W., 628 Haines.
Howard, Mrs. W. E., 6616 Gaston.
*Hudson, Mrs. Lee, 4312 Overhill Dr.
Jackson, Mrs. R. W., De Loache Ave.
Jackson, Mrs. R. R., 5639 Gaston.
Jenkins, Mrs. J. L., Forest Lane.
Jenkins, Mrs. Speight, Preston Rd.
*Jones, Mrs. J. G., 6875 Tokalon Dr.
*Jones, Mrs. W. D., 5808 Gaston.
*Kerr, Mrs. J. G., 3512 Rosedale.
Kilgore, Mrs. D. G., 3318 Dartmouth.
*Kindley, Mrs. G. C., 5211 Live Oak.
*King, Mrs. K. B., 3721 Granada.
Kinsell, Mrs. Benjamin, 2713 Knight.
*Kirksey, Mrs. T. M., 4521 North Versailles.
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*Knowles, Mrs. W. M., 6636 Avalon.
*Laugenour, Mrs. D. P., 4549 Arcady.
*Lee, Mrs. Ridings E., 5903 McComas.
Leeper, Mrs. E. P., 4540 Edmondson.
*Levy, Mrs. H. R., 4019 Durid Lane.
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Lively, Mrs. W. M., 541 E. Jefferson.
*Loftis, Mrs. E. L., 5303 Mercedes.
*Looney, Mrs. W. W., 6657 Avalon.
*Love, Mrs. T. S., Midway & North Shore Dr.
*Maddox, Mrs. W. G., 4120 Normandy.
*Marchman, Mrs. O. M., 5328 Live Oak.
*Marshall, Mrs. J. H., 6241 La Vista Dr.
*Martin, Mrs. Charles L., 3709 Potomac.
*Martin, Mrs. J. M., 732 Haines.
*Martin, Mrs. W. E., 7201 Vivian.
*Mason, Mrs. P. K., 6300 Prospect.
Massey, Mrs. W. E., 3304 Stanford.
*Mathews, Mrs. P. W., 4327 W. Potomac.
*McBride, Mrs. Dayton, 3629 Beverly Dr.
*McBride, Mrs. Robert, 6700 Turtle Creek.
*McCracken, Mrs. J. H., 4401 Highland Dr.
McDonald, Dr. Viola, 1449 San Rafael Dr.
*McFarland, Mrs. G. B., 6909 Golf Dr.
McGuire, Mrs. J. H., 4820 St. John's Dr.
*McIver, Mrs. Julius, 4029 Lemmon.
McLaurin, Mrs. H. L., Jr., 4501 Arcady.
*McLaurin, Mrs. J. G., 4710 Munger.
McLaurin, Mrs. Kate, 5019 Ross.
McLeod, Mrs. J. N., 6722 Lakewood.
*McReynolds, Mrs. J. O., 4005 Euclid.
*Mendenhall, Mrs. Elliott, 4221 Belclaire.
*Metz, Mrs. M. Hill, 3544 Rosedale.
*Miller, Mrs. Tate, 3220 Princeton.
Milliken, Mrs. S. E., 3925 Maple.
*Milliken, Mrs. S. Ramsey, 4918 Swiss.
Mills, Mrs. James T., 4849 Montrose.
*Montgomery, Mrs. J. T., 3505 Mockingbird Lane.

†Address is in Dallas unless otherwise stated.

*Moore, Mrs. H. L., 4204 Beverly Dr.
*Moore, Mrs. R. H. (Pres.), 4700 Neola Dr.
*Moore, Mrs. R. L., 4504 Emerson.
Morris, Mrs. Truett, 1430 San Rafael Dr.
*Moursund, Mrs. W. H., 714 North Beacon.
*Moursund, Mrs. W. H., Jr., 4049 Hawthorne.
*Murchison, Mrs. D. R., 4305 Edmondson.
Neuman, Mrs. Albert, 1823 Forest.
*Newson, Mrs. A. A., 4906 McComas.
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Mt. Pleasant
Council Woman

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Kelly, Mrs. Tom E., Mt. Pleasant.
Taylor, Mrs. Wm. A., Mt. Pleasant.
Taylor, Mrs. J. S., Mt. Pleasant.

Index Auxiliary Transactions

	Page
Meetings of Executive Board	162, 179
General Meeting	163
Standing Committees—1940-1941	179
Council Women—1940-1941	179
Report of President	167
President-elect	167
First Vice-president	167, 168
Second Vice-president	168
Third Vice-president	168
Fourth Vice-president	169
Recording Secretary	169
Corresponding Secretary	169
Publicity Secretary	169
Treasurer	170
Parliamentarian	172
Historian	172
Reports of Committees—	
Auditing	170
Legislative	172
Memorial	172
Student Loan Fund	173
George Plunkett Red Fund	173
Reference	174
Archives	174
Exhibits	174
Texas Research to Southern Medical	174
State Memorial	174
Public Relations	174
Budgets	175
Credentials and Registration	177
Resolutions	177
Revisions	177
Nominating	178
Reports of Council Women—	
First District	175
Second District	175
Third District	175
Fourth District	175
Fifth District	175
Seventh District	176
Eighth District	176
Ninth District	176
Tenth District	176
Eleventh District	176
Twelfth District	176
Thirteenth District	177
Fourteenth District	177
Addresses—	
Mrs. J. B. Marshall	162
Mrs. C. B. Alexander	162
Mrs. S. H. Watson	162, 178
Mrs. S. C. Applewhite	163, 178
Mrs. L. S. Thompson	163
Mrs. H. S. Renshaw	164
Dr. L. H. Reeves	164
Mrs. R. K. Packard	164
Mrs. H. E. Roensch	178

MEMBERSHIP

STATE MEDICAL ASSOCIATION OF TEXAS

JUNE, 1940

No. 1. El Paso District, embracing the following counties: Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, Loving, Pecos, Presidio, Reeves, Ward and Winkler.

No. 2. Big Spring District, embracing the following counties: Andrews, Borden, Dawson, Dickens, Ector, Fisher, Gaines, Garza, Glasscock, Howard, Jones, Kent, King, Lynn, Martin, Midland, Mitchell, Nolan, Scurry, Stonewall, Taylor, Terry and Yoakum.

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No. 7. Austin District, embracing the following counties: Bastrop, Blanco, Burnet, Caldwell, Hays, Lampasas, Lee, Llano, Travis and Williamson.

No. 8. DeWitt District, embracing the following counties: Calhoun, Colorado, DeWitt, Fayette, Goliad, Jackson, Lavaca, Matagorda, Victoria and Wharton.

No. 9. Southern District, embracing the following counties: Austin, Brazoria, Burleson, Fort Bend, Galveston, Grimes, Harris, Madison, Montgomery, Polk, San Jacinto, Trinity, Waller, Walker and Washington.

No. 10. Southeastern District, embracing the following counties: Angelina, Chambers, Hardin, Jasper, Jefferson, Liberty, Nacogdoches, Newton, Orange, Panola, Rusk, Sabine, San Augustine, Shelby and Tyler.

No. 11. Eastern District, embracing the following counties: Anderson, Cherokee, Freestone, Henderson, Houston, Leon and Smith.

No. 12. Central District, embracing the following counties: Bell, Bosque, Brazos, Coryell, Erath, Falls, Hamilton, Hill, Hood, Johnson, Limestone, McLennan, Milam, Navarro, Robertson and Somervell.

No. 13. Northwestern District, embracing the following counties: Archer, Baylor, Callahan, Clay, Eastland, Haskell, Jack, Knox, Montague, Palo Pinto, Parker, Shackelford, Stephens, Tarrant, Throckmorton, Wichita, Wilbarger, Wise and Young.

No. 14. Northern District, embracing the following counties: Collin, Cooke, Dallas, Delta, Denton, Ellis, Fannin, Franklin, Grayson, Hopkins, Hunt, Kaufman, Lamar, Rains, Rockwall, Van Zandt and Wood.

No. 15. Northeastern District, embracing the following counties: Bowie, Camp, Cass, Gregg, Harrison, Marion, Morris, Red River, Titus and Upshur.

FIRST OR EL PASO DISTRICT

Dr. Ralph Homan, El Paso, Councilor.

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Craige, Branch, El Paso.
Cox, L. T., El Paso.
Cummins, Erwin J., El Paso.
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Davis, Wm. J., El Paso.
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Duckett, Walter F., El Paso.
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*Dutton, Loraine O., El Paso.
Ebell, W., El Paso.
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Homan, Robt. B., Sr., El Paso.
*Homan, Robt. B., Jr., El Paso.
Hornedo, Manuel, El Paso.
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Jenness, Burt F., El Paso.
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King, Sam R., El Paso.
Kitterman, P. G., El Paso.
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Liddell, Thos. Clark, El Paso.
Long, Arthur D., El Paso.
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Von Almen, S. G., El Paso.
Von Briesen, D., El Paso.
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Camp, Jim, Pecos.
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Niehuss, Charles, Monahans.
Roberts, Rufus A., Pecos.
Robinson, C. A. (Pres.), Kermit.
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Daniel, A. H., Brownfield.
Davidson, H. T., Seagraves.
Davis, Earl C., Brownfield.
Davis, J. W., O'Donnell.
*Dunn, Wm. H. (Pres.), Lamesa.
Frazier, S. Z., Lamesa.
Gerardy, Carl W., Seagraves.
Jacobson, M. E., Brownfield.
Loveless, J. C., Lamesa.
Loveless, R. W., Lamesa.
Price, N. H., Lamesa.
Prohl, Emile (Sec.), Tahoka.
Richards, L. D., Seminole.
Scroggie, Val Dean, Seminole.
Shepard, O. H., O'Donnell.
Sinclair, J. W., Tahoka.
Smith, Alfred H., Lamesa.
Stevenson, Edward N., Seagraves.
Thompson, Chase S., Tahoka.
Treadaway, Thos. L., Brownfield.
Turner, Jno. R., Brownfield.

ECTOR-MIDLAND-MARTIN-HOWARD-ANDREWS-GLASSCOCK COUNTIES MEDICAL SOCIETY

*Absher, L. Alton (Sec.), Midland.
*Barganier, J. H., Odessa.
Bennett, M. H., Big Spring.
Bobo, Tom C. (Pres.), Midland.
Boyle, Frank B., Big Spring.
Chapple, J. H., Midland.
*Collins, T. M., Big Spring.
Cowper, R. B. G., Big Spring.
Haley, Jas. F. (Hon.), Midland.
*Hall, G. T., Big Spring.
Headlee, E. V., Odessa.
Hestand, H. E., Odessa.
*Hogan, J. E., Big Spring.
*Johnson, Homer B., Midland.
Jones, Robt. R., Midland.
Leggett, L. W., Midland.
Lemee, Raymond A., Odessa.
Little, J. G., Andrews.
Malone, P. W., Big Spring.
McMahan, Geo. T., Big Spring.
O'Barr, J. T. (Hon.), Big Spring.
Rhodes, W. S., Colorado.
*Ryan, W. E., Midland.
Sanders, Preston R., Big Spring.
Sharpe, S. B., Odessa.
Thomas, John B., Midland.
Thornton, E. K., Odessa.
True, G. S., Big Spring.
Whitehouse, W. G., Midland.
*Wood, G. H., Big Spring.
Wood, J. K., Odessa.

NOLAN-FISHER-MITCHELL COUNTIES MEDICAL SOCIETY

Allen, Robt. R., Sweetwater.
*Allen, W. L., Rotan.
Callan, Chester U., Rotan.
Crymes, J. Melvin, Colorado.
Dowling, Urban J., Sweetwater.
*Fortner, Amos H., Sweetwater.
*Gray, Geo. A., Sweetwater.
Hall, Jos. L., Stanton.
Hambright, J. G. (Hon.), Roby.
Jensen, Martin H., Sweetwater.
Johnson, Bruce H., Loraine.
*Loeb, Sam A., Sweetwater.
Logsdon, Harry A., Colorado.
Monk, Chas. L., Sweetwater.
Peters, Roland O., Sweetwater.
P'Pool, Wm. F., Sweetwater.
Rhode, Oscar E., Colorado.
Richardson, James K. (Sec.), Sweetwater.
Rosebrough, Chas. A., Sweetwater.
Slayden, Thos. L., Sweetwater.
Stubbs, James B., Sweetwater.
Wilkinson, Robt. T., Rotan.
Young, James W., Roscoe.
*Young, Tom D. (Pres.), Roscoe.

SCURRY-DICKENS-KENT-GARZA-BORDEN-KING-STONEWALL COUNTIES MEDICAL SOCIETY

Howell, Robert L., Snyder.
*Howle, T. M., Snyder.
Johnson, W. R., Snyder.
*Nichols, P. C., Spur.
Redwine, Harry P. (Sec.), Snyder.
Rosser, H. E., Snyder.
Scarborough, Alonza O., Snyder.
*Shytles, H. W. Grady (Pres.), Snyder.

TAYLOR-JONES COUNTIES MEDICAL SOCIETY

Adams, Clint E., Abilene.
Adamson, W. B., Abilene.
Alexander, J. M., Abilene.
Armstrong, Marvin, Merkel.
Bailey, J. B., Clyde.
*Bailey, S. W., Abilene.
*Bass, T. B., Abilene.
*Burditt, J. N. (Pres.), Abilene.
Bynum, J. T., Jr., Big Spring.
Campbell, M. E., Abilene.
Cash, W. A. V., Abilene.
*Clark, J. Frank, Abilene.
*Cockerell, Earl R., Abilene.
Cooper, J. Stewart, Abilene.
Crowe, Jack A., Abilene.
Curb, D. G., Albany.
Daly, Joseph Madison, Abilene.
Dowda, S. T., Abilene.
Estes, J. M., Jr., Abilene.
*Estes, Sol B., Abilene.
Gardner, Chester B., Merkel.
*Gibson, J. P., Abilene.
Gill, J. M. F., Abilene.
Grubbs, L. F., Abilene.
*Hedrick, T. Wade, Abilene.
Hodges, Frank C., Abilene.
Hudson, F. E., Stamford.
Johnson, L. F., Abilene.
*Jones, A. McK., Anson.
*Kirkpatrick, R. B., Abilene.
Leggett, Claude B., Abilene.
Matthews, W. J., Abilene.
McCreight, Wm. J., Anson.
*McDonald, Donald H. (Sec.), Abilene.
McFaddin, C. A., Abilene.
Merrill, Linwood E., Lueders.
*Metz, L. F., Stamford.
Middleton, Edwin E., Abilene.
Pattillo, Guy L., Abilene.
Pickard, L. J., Abilene.
Pope, A. J., Abilene.
Prichard, C. L., Abilene.
*Ramsey, Wayne V., Abilene.
Rhodes, B. F., Abilene.
*Seale, Wm. Hubert, Abilene.
*Sellers, Erle D., Abilene.
Smith, Newton J., Anson.
*Snow, Wm. R., Abilene.
*Southard, Dallas, Stamford.
Tull, Raymond H., Abilene.
*Varner, R. W., Abilene.
Warnick, J. H., Abilene.
Webster, Robt. A., Clyde.
Whiting, E. T., Abilene.
*Williams, Chas. F., Abilene.
Zehnpfennig, U. H., Merkel.

THIRD OR PANHANDLE DISTRICT

Dr. E. A. Rowley, Amarillo, Councilor.

CHILDRESS-COLLINGSWORTH-HALL COUNTIES MEDICAL SOCIETY

Bubblis, John L., Boise, Idaho.
Carriker, Fred H. (Pres.), Childress.
Cecil, John G., Wellington.
Clark, R. Ernest, Memphis.
Fox, Grover C., Childress.
Garner, J. E., Turkey.
Goodall, O. R., Memphis.
*Harper, John W., Wellington.
Hyder, D. C., Donna.
Jernigan, J. H., Childress.
Jeter, Perry R., Childress.
Jones, Chas. B. (Sec.), Wellington.
*Jones, Elmer W., Wellington.
Michie, J. D., Childress.
Miller, Chas. Hyett, Big Spring.
Morgan, T. M., Childress.
*Moss, E. W., Wellington.
*Odom, James A., Memphis.
Schoolfield, H. F., Memphis.
Townsend, S. H., Childress.
*Vardy, P. L., Estelline.
*White, F. A., Childress.
Wilson, Winfred, Memphis.

DALLAM-HARTLEY-SHERMAN-MOORE COUNTIES MEDICAL SOCIETY

Brown, Thos. Guy, Dumas.
Dawson, Geo. W. (Hon.), Dalhart.
Dawson, Wm. Artis (Pres.), Dalhart.
*Moore, Victor R. (Sec.), Dalhart.
Munsell, J. D., Dumas.
Norvell, John W., Stratford.
Pieratt, Karl W., Dalhart.
Reid, F. I., Dumas.

DONLEY-ARMSTRONG COUNTIES MEDICAL SOCIETY

*Carroll, Wm. A., Claude.
Ellis, Thomas Henry, Clarendon.
Hamm, Edward F., Clarendon.
*Jenkins, Berry L. (Sec.), Clarendon.
Jenkins, Oscar L., Dallas.
Stricklin, Calvin G., Clarendon.
Stricklin, Mark L. (Pres.), Clarendon.

GRAY-WHEELER COUNTIES MEDICAL SOCIETY

Bellamy, R. M., Pampa.
*Brown, R. M., Pampa.
Brunow, V. E. von, Pampa.
*Buckner, K. L., Henrietta.
Finley, H. W., McLean.
Gilliland, Jas. O., Pampa.
Gooch, J. W., Shamrock.
Hamer, J. G., Shamrock.
*High, Clifton E., Pampa.
Howze, J. W., Pampa.
Johnson, J. B., Pampa.
*Jones, W. C., Pampa.
Kelly, John H., Pampa.
*Nicholson, H. E. (Pres.), Wheeler.
Overton, M. C., Jr., Pampa.
Purviance, Walter, Pampa.
Shaddix, J. W., Shamrock.
Turner, Earl H., Pampa.
Walker, Glenn R. (Sec.), Wheeler.
*Webb, Roy A., Pampa.
Wild, W. B., Pampa.
Wilder, H. L., Pampa.
Zeigler, B. A., Shamrock.
Zeigler, Joel, Shamrock.
Zeigler, Paul, Shamrock.

HALE-FLOYD-BRISCOE-SWISHER COUNTIES MEDICAL SOCIETY

Anders, Percy C., Plainview.
Anderson, J. C. (Hon.), Austin.
Dubuy, Carl T., Tulia.
*Dye, Everett L., Jr., Plainview.
Dye, Mary R., Plainview.
Ellsworth, Amos D. (Sec.), Plainview.
Greer, Neil E., Lockney.
Guthrie, Aubrey E., Floydada.
Hall, Grover C., Plainview.
Hansen, J. Harvey (Pres.), Plainview.
Jones, Don P., Plainview.
Mitchell, Robert H., Plainview.
Nichols, Everett O., Sr., Plainview.
Nichols, Everett O., Jr., Plainview.
Pitts, Donald H., Floydada.
Smith, George V., Floydada.
Stewart, Evans P., Tulia.
Underwood, Smith J., Hale Center.
Wayland, Levi C., Plainview.

HANSFORD-HEMPHILL-LIPSCOMB-ROBERTS-OCHILTREE COUNTIES MEDICAL SOCIETY

Davis, J. J., Higgins.
*Gower, Joe E., Spearman.
Kengle, Geo. L. (Sec.), Perryton.
May, Jessie Carlos, Perryton.
Morris, Ernest H. (Pres.), Canadian.
Snyder, Edward H., Canadian.

HARDEMAN-COTTLE-FOARD-MOTLEY COUNTIES MEDICAL SOCIETY

Clark, Dan H., (Sec.), Quanah.
Clark, Hines, Crowell.
Conley, Jas. W. (Pres.), Quanah.
Friend, Victor V., Crowell.
Frizzell, Thomas D., Quanah.
George, Jos. Mathews, Quanah.
*Hanna, John J., Quanah.
Hill, Jesse M., Crowell.
Hughes, John F., Roaring Springs.
Lowery, Thomas A., Chillicothe.
McDaniel, Robt. Ray, Quanah.
McGowan, Wm. J., Paducah.
Pate, Clarence C., Paducah.
*Pate, Joe J., Paducah.
*Stanley, James S., Matador.
Traweek, Albert C., Matador.
Traweek, Albert C., Jr., Matador.

HUTCHINSON-CARSON COUNTIES MEDICAL SOCIETY

Barksdale, Wm. C., Panhandle.
*Brooks, Wm. W., Phillips.
Draper, Leonidas M., Borger.
Gibner, Geo. P., Spearman.
Hamra, Henry M., Phillips.
Hansen, Arthur F., Borger.
Hansen, Lawrence C., Borger.
Jones, Edgar, A. (Hon.), Lubbock.
Morris, Isaac C., Borger.
*Petty, Lester E., Borger.
Stephens, Milton M. (Sec.), Borger.
Stephens, Walton G. Borger.
Walker, John H. (Hon.), Montezuma, New Mexico.
Wallace, Henry G. (Pres.), Borger.

LAMB-BAILEY-HOCKLEY-COCHRAN COUNTIES MEDICAL SOCIETY

Coen, J. R., Littlefield.
*Dupre, John D., Levelland.
Green, F. R., Sudan.
Green, L. T., Jr., Muleshoe.
Lancaster, D. D., Muleshoe.
Lusk, H. N., Levelland.
Patterson, Geo. T., Morton.
Payne, Clifford E., Littlefield.
Phillips, C. M., Levelland.
Popplewell, A. L. (Pres.), Anton.
*Shotwell, I. T., Jr., (Sec.), Littlefield.

LUBBOCK-CROSBY COUNTIES MEDICAL SOCIETY

Arnett, Samuel C., Lubbock.
*Baugh, William L., Lubbock.
*Benson, Martin H., Lubbock.
Blake, Emerson M., Lubbock.
Canon, Robt. T., Lubbock.
Clark, Vester V., Lubbock.
Cravens, Wm. E. (Hon.), Lubbock.
Cross, Denzil D., Lubbock.
Dunn, Sam G., Lubbock.
Elkins, Clyde F., Lubbock.
English, Otis W., Lubbock.
Ewing, Mahon M., Lubbock.
Girdner, Wm. H., Abernathy.
Groshart, Oscar D., Slaton.
*Hand, Orra R., Lubbock.
Haney, Edward L., Ralls.
*Hunt, Ewell L., Lubbock.
Hutchinson, Benj. B., Lubbock.
Hutchinson, Jas. T., Lubbock.
Jacobson, Harry, Post.
Jenkins, Byron A. (Pres.), Lubbock.
Key, Olan, Lubbock.
*Krueger, Julius T., Lubbock.
Lattimore, Jas. P., Lubbock.
Loveless, Roy G., Slaton.
*Malone, Frank B., Lubbock.
Mansell, Christopher C., Lubbock.
Mast, Henrie E., Lubbock.
Maxwell, Herbert C., Lubbock.
McCarty, Robert H., Lubbock.
Miller, Pauline A. (Sec.), Lubbock.
Overton, Marvin C., Lubbock.
Payne, Wm. E., Slaton.
Reeser, Wayne, Lubbock.
*Rollo, Jas. W., Lubbock.
Rushing, Finis E., Lubbock.
Smith, Gerald S., Lubbock.
Snow, Wister C., Ralls.
Standefer, Fred W., Lubbock.
Stewart, Allen T., Lubbock.
Stiles, Jas. H., Lubbock.
Surman, Arnold C., Post.
Taylor, Otis, Jr., Lubbock.
Wagner, Charles J., Lubbock.
Westover, Harry M., Ropesville.
*Wilson, Jas. D., Lubbock.
Woods, Lemmie B., Lubbock.

POTTER COUNTY MEDICAL SOCIETY

Aronson, Sam J., Amarillo.
Askew, W. L., Amarillo.
Black, R. P., Amarillo.
Blackwell, Ben T., Amarillo.
Broyles, Sam K., Amarillo.
Carroll, Ralph J., Amarillo.
*Churchill, Thos P., Amarillo.
*Crume, J. J., Amarillo.
Crumley, Fred J., Amarillo.
Cultra, Geo. M., Amarillo.
Duncan, Frank B., Amarillo.
Duncan, Robt. A., Amarillo.
Dutton, W. Forrest, Amarillo.
Foster, Robt. T. (Hon.), Groom.
*Fuller, Martin L., Amarillo.
Gilkerson. Nan L., Amarillo.
*Gist, R. D., Amarillo.
Goldston, Alton B., Amarillo.
Gustin, Jas. W., Amarillo.
Hall, Neal, Amarillo.
*Hendrick, J. W., Amarillo.
Jordaan, J. D., Amarillo.
Keys, Richard, Amarillo.
Klingensmith, W. R., Amarillo.
Knight, Melvin K., Amarillo.
Latson, Harry H., Amarillo.
*Lemmon, J. R., Amarillo.
Loving, Dan H., Amarillo.
*Lumpkin, A. F., Amarillo.
Lumpkin, Samuel H., Amarillo.
*Marcley, David M., Amarillo.
Marsalis, Don S., Amarillo.
Miller, Frank P., Amarillo.
*Murphy, Weldon O., Amarillo.
Owens, Guy, Amarillo.
Ozier, J. B., Amarillo.
Patton, Louis K., Amarillo.
Payne, Ralph B., Amarillo.
Powers, Evelyn G., Amarillo.
Powers, Geo. L., Amarillo.
Prince, Norman C., Amarillo.
*Puckett, B. M., Amarillo.
Puckett, Howard E., Amarillo.
Rasco, Isaac, Amarillo.
Reeves, E. Edwin, Amarillo.
Roach, D. (Hon.), Amarillo.
Robberson, Jason H., Amarillo.
*Rowley, E. A., Amarillo.
*Royse, Geo. T., Amarillo.
Streit, A. J., Amarillo.
Swindell, Raymond R., Amarillo.
*Thomas, Wm. B., Amarillo.
Van Sweringen, Walter, Amarillo.
*Vaughn, John H. (Pres.), Amarillo.
Vinyard, Geo. T., Amarillo.
Vineyard, Roy L., Amarillo.
*Waddill, Geo. M., Jr., Amarillo.
Wertz, Royal F., Amarillo.
*White, J. B. (Sec.), Amarillo.
Wilbanks, Jas. G., Amarillo.
Winsett, A. E., Amarillo.
Wrather, J. R., Amarillo.

RANDALL-DEAF SMITH-PARMER-CASTRO-OLDHAM COUNTIES MEDICAL SOCIETY

Clark, D. W. (Hon.), Vega.
Cogswell, Ronald E., Dimmitt.
Donnell, Chas. E., Canyon.
Jarrett, Robt. P. (Sec.), Canyon.
Johnson, V. Scott, Farwell.
LeGrand, Geo. F., Hereford.
Lemmon, W. N., Hereford.
Loyd, O. H., Vega.
Miller, Mayes, Dimmitt.
Neblett, Robt. A., Canyon.
Robison, Dutch K., Lamesa.
Stover, J. E., Friona.
Wills, Ralph R. (Pres.), Hereford.

FOURTH OR SAN ANGELO DISTRICT

Dr. O. N. Mayo, Brownwood, Councilor.

BROWN-COMANCHE-MILLS-SAN SABA COUNTIES MEDICAL SOCIETY

*Allen, Homer B., Brownwood.
Anderson, Wm. B., Brownwood.
Brooking, J. E. (Hon.), Goldthwaite.
Bullard, Chester C., Brownwood.
Burns, Edward J., Bangs.
Cadenhead, Ernest F., Brownwood.
*Campbell, Jas. M., Goldthwaite.
Claunche, DeWitt, Comanche.
Daughety, Jewel, Brownwood.
Farley, F. W., San Saba.
Felts, Richard C., San Saba.
Gray, A. J., Comanche.
Gray, Chas. W., Comanche.
*Hallum, Roy G., Brownwood.
Hopper, John J., Stanton.
Horn, Jesse M., Brownwood.
*Hughes, Sidney W. (Sec.), Brownwood.
*Lobstein, Henry L., Brownwood.
*Locker, H. L., Brownwood.
*Mayo, Oscar N., Brownwood.
*Ory, L. K. (Pres.), Comanche.
Paige, Wendell H., Brownwood.
Pence, Winfield S., San Saba.
Reynolds, A. M., De Leon.
Scott, David R., Brownwood.
Shelton, Bennett M., Brownwood.
Snyder, Ned, Brownwood.
Stephen, Jas. J., Goldthwaite.
Taylor, Albert L. (Hon.), Brownwood.
Tottenham, John W., Brownwood.
Walker, Jas. B. N., Brownwood.

COLEMAN COUNTY MEDICAL SOCIETY

*Aston, Samuel N. (Pres.), Coleman.
Bailey, Robert, Coleman.
*Board, J. Paul, (Sec.), Santa Anna.
Burke, Francis M., Coleman.
Cochran, Robert H., Coleman.
Lovelady, Ray Roy, Santa Anna.
*McDonald, Earl D., Santa Anna.
Moody, Charles O., Coleman.
Nichols, John M., Coleman.
Weaver, Manly E., Coleman.
Young, Josephus C., Coleman.

CRANE-UPTON-REAGAN COUNTIES MEDICAL SOCIETY

Birdsong, Wm. F. (Sec.), Texon.
Cooper, James L., McCamey.
Frey, Conrad, Crane.
Pattison, J. F., Big Lake.
*Rawlins, E. V., McCamey.
Robinson, S. F. (Pres.), Crane.

KIMBLE-MASON-MENARD-McCULLOCH COUNTIES MEDICAL SOCIETY

Anderson, Jas. P., Brady.
Anderson, Jas. S., Brady.
Baze, P. A., Mason.
Beakley, B. B., Melvin.
Granville, J. B., Brady.
Hays, Aaron R., Brady.
Hinchman, A. W., Brady.
Huff, Oscar, Mason.
Jordan, Dowell W., Brady.
Kellam, Seth W., Menard.
Land, W. M. (Pres.), Lohn.
*Leggett, J. A., Menard.
*McCall, John G., Brady.
McCollum, Floyd L. (Sec.), Mason.
McCollum, Granville G., Mason.
Moss, E. Bruce, Junction.
*Ricks, Glenn H., Brady.

RUNNELS COUNTY MEDICAL SOCIETY

Bailey, C. F. (Pres.), Ballinger.
*Chandler, Oran H. (Sec.), Ballinger.
Dixon, J. W., Winters.
Douglas, James G. (Hon.), Ballinger.
Hale, Frank M., Ballinger.
Halley, Wm. B., Ballinger.
Jennings, T. V., Winters.
Lasater, O. R., Ballinger.
Macune, J. W., Ballinger.
Shiller, J. J., Rowena.

TOM GREEN EIGHT COUNTIES MEDICAL SOCIETY

*Anderson, H. M., Sanatorium.
*Anderson, Wilson D., San Angelo.
Brown, B. T., San Angelo.
*Bunyard, Jos. A., San Angelo.
*Bush, W. L., San Angelo.
Chaffin, J. B., San Angelo.
Chapman, John S., Sanatorium.
Cobb, W. W., San Angelo.
Everitt, W. B. (Hon.), Cleveland.
*Fink, Robt. M., San Angelo.
Fowler, D. D. (Hon.), Paint Rock.
Griffith, J. K., Robert Lee.
Hanks, Robt. J., Sanatorium.
Helbing, Arlington, Barnhart.
Hixson, Jesse S., San Angelo.
*Hoskins, Henry R., San Antonio.
Howell, John F., Sonora.
Hutchins, Leon F. (Sec.), San Angelo.
Jones, J. Frank, San Angelo.
Keys, C. T., San Angelo.
Kunath, C. A., San Angelo.
Lewis, Geo. L., San Angelo.

Mays, C. E. (Hon.), San Angelo.
McAnulty, J. P., San Angelo.
*McCullough, David, Sanatorium.
McGee, Aubrey S., San Angelo.
*McIntire, Floyd T. (Pres.), San Angelo.
*McKnight, J. B., Sanatorium.
Mee, E. L., San Angelo.
Mitchell, W. Grady, San Angelo.
Nibling, G. W., San Angelo.
Patton, W. D. (Hon.), Eldorado.
Potts, Chas. R., San Angelo.
Powers, R. L., San Angelo.
Rape, J. Marvin, San Angelo.
Richmond, Stanley M., San Angelo.
Round, K. B., San Angelo.
Schulkey, Wm. E., San Angelo.
*Schulze, Victor E., San Angelo.
Sessums, J. Valton, San Angelo.
Sessums, John R., San Angelo.
*Smith, Jerome H., San Angelo.
Stanley, Edward S., San Angelo.
Stephenson, Martin L., Sanatorium.
Sutton, Dewey, San Angelo.
Swann, W. J., Sterling City.
Tester, Lewis K., San Angelo.
Wall, D. D., San Angelo.
Weir, Wm. C., Eden.
*Wiggins, John A., Jr., Sanatorium.
*Wimberly, Fred S., Sanatorium.
Windham, Robt. E., San Angelo.
Womack, C. T., San Angelo.
Woodward, Lewis O., San Angelo.
Yates, General M. (Hon.), San Angelo.

FIFTH OR SAN ANTONIO DISTRICT

Dr. C. E. Scull, San Antonio, Councilor.

ATASCOSA COUNTY MEDICAL SOCIETY

Duncan, J. W. (Hon.), Jourdanton.
Guynes, J. T., Jourdanton.
Irwin, C. M., Charlotte.
Mann, R. E., Pleasanton.
Payne, John H., Jourdanton.
Peavy, J. E., Poteet.
Shotts, C. C., Jr. (Pres.), Pleasanton.
*Touchstone, R. B., Lytle.
Ware, T. P., Poteet.
Wilson, S. W. (Sec.), Poteet.
Youngblood, Richard C., Pleasanton.

BEXAR COUNTY MEDICAL SOCIETY

Aderhold, Jas. P., San Antonio.
*Alexander, C. B., San Antonio.
Allen, S. W., San Antonio.
Allin, F. A., San Antonio.
Allin, Willis W., San Antonio.
Altgelt, Daniel D., San Antonio.
Anderson, Jas. L., San Antonio.
*Applewhite, Scott C., San Antonio.
Arendt, E. J., San Antonio.
Atkinson, Donald T., San Antonio.
Atmar, R. C., San Antonio.
Barnett, John L., San Antonio.
Barron, W. M., San Antonio.
Barton, Julian C., San Antonio.
Bates, LeRoy E., San Antonio.
*Beach, Asa, San Antonio.
Beal, Albert R., San Antonio.
Beck, Emma, San Antonio.
Bennett, W. R., San Antonio.
Biggar, J. H., San Antonio.
Bloom, Bernard H., San Antonio.
Boccelato, S. L., San Antonio.
Boehs, Charles J., San Antonio.
*Bondurant, W. W., Jr. (Sec.), San Antonio.
Bonnet, Edith M., San Antonio.
Boso, Fred M., San Antonio.
Bosshardt, C. E., San Antonio.
Borsheim, Raymond S., San Antonio.
*Bowen, P. G., San Antonio.
*Bowen, Robt. E., San Antonio.
*Boyd, G. D., Jr., San Antonio.
Bronson, A. Scott, San Antonio.
Brown, A. A., San Antonio.
Burg, Edward M., San Antonio.
Burg, Sigmund S. (Hon.), San Antonio.
Burk, W. E., San Antonio.
*Burleson, John H., San Antonio.
Bush, Howard M., San Antonio.
Butler, T. B., San Antonio.
*Cade, C. C., San Antonio.
Cade, W. H., San Antonio.
Calhoun, Ina Moodie (In.), San Antonio.
Callan, John R., San Antonio.
Carnahan, Robert G., San Antonio.
Cassity, J. C., San Antonio.
Cayo, E. P., San Antonio.
Cayo, Edward A., San Antonio.
Celaya, Henry, San Antonio.
Cerna, David (Hon.), San Antonio.
Champion, A. N., San Antonio.
Childers, M. A., Jr., San Antonio.
Christian, Thomas E., San Antonio.
Clark, A. Fletcher, San Antonio.
Clifton, Collis B., San Antonio.
Coates, Elmer T., San Antonio.
Cochran, J. L., San Antonio.
Cook, Clara G., San Antonio.
Cooper, Jean Head, San Antonio.
Cooper, Fred B., San Antonio.
*Cooper, Melbourne J., San Antonio.
*Copeland, Jos. B., San Antonio.
*Cornick, Geo. B., San Antonio.
Cotham, C. M., San Antonio.
*Cowles, Andrew G., San Antonio.
*Coyle, Edward W., San Antonio.
Crain, Chas. E., San Antonio.
*Crockett, R. H., San Antonio.
Cutter, I. T., San Antonio.
Davis, D. W., (In.), San Antonio.
Davis, Herman L., San Antonio.
Davis, Milton, San Antonio.
Delagoa, Arthur Clark, San Antonio.
DePew, E. V., San Antonio.
Dittman, C. H., San Antonio.
Dixon, Chas. D. (Hon.), San Antonio.
Donop, Perry T., San Antonio.
*Dorbandt, Thos. M., San Antonio.
Doss, J. M., San Antonio.
Dreiss, A. M., San Antonio.
Dufner, Romie Mark, San Antonio.
*Dumas, Edward D., San Antonio.
Edwards, Douglas, San Antonio.
Evans, E. O., San Antonio.
Farmer, W. C. (Hon.), San Antonio.
Fetzer, William J., San Antonio.
*Folbre, Thos. W., San Antonio.
Forbes, M. A., San Antonio.
*Furey, Ellen D., San Antonio.
Garnett, Walter L., Mexico City.
Geyer, Geo. H., San Antonio.
Giesecke, Carl G., San Antonio.
Gilbreath, S. Frank, San Antonio.
*Giles, Roy G., San Antonio.
*Gill, Wm. D., San Antonio.
Glauner, Frederick E., San Antonio.
Gleckler, John D., San Antonio.
Glober, Lee J., San Antonio.
Goeth, Carl F., San Antonio.
Goeth, R. A., San Antonio.
Goetz, Jos. T., San Antonio.
Goode, John W., San Antonio.
*Goodson, Thos. N., San Antonio.
Gossett, Robt. F., San Antonio.
Gough, H. W., San Antonio.
*Graves, Amos Maverick, San Antonio.
Graves, W. E., San Antonio.
Grimland, G. A., San Antonio.
*Haggard, Chas. H., San Antonio.
Haggard, Frank N., San Antonio.
*Hairston, J. Thos., San Antonio.
Hamilton, W. S., San Antonio.
*Hargis, W. H., San Antonio.
Harper, Mary C. (Hon.), San Antonio.
Hartman, Albert W. Jr., San Antonio.
Hartman, Henry C., San Antonio.
Heck, W. H., San Antonio.
*Heifer, Lewis M., San Antonio.
Henry, C. D. San Antonio.
Henry, Mary M., San Antonio.
Herff, Adolph, Boerne.
Herff, Aug. F., San Antonio.
Herff, F. P., San Antonio.
Herff, John B., San Antonio.
Hicks, W. D. (Hon.), San Antonio.
*Hill, Lucius D., Jr., San Antonio.
*Hill, W. Herbert (Pres.), San Antonio.
Holshouser, Chas. A., San Antonio.
Howerton, Ernest E., San Antonio.
Hunt, Kent N., San Antonio.
*Jackson, Dudley, San Antonio.
*Jackson, L. B., San Antonio.
Jackson, L. Walford, San Antonio.
*Jackson, Martha Beal, San Antonio.
Jackson, Ralph S. (Hon.), San Antonio.
Johnson, Allen, San Antonio.
Johnson, Harry McC., San Antonio.
*Johnson, Max E., San Antonio.
*Johnson, W. J., San Antonio.
Joyce, W. H., San Antonio.
Judkins, O. H., San Antonio.
*Kahn, I. S., San Antonio.
*Kaliski, Sidney R., San Antonio.
Kasten, Leona J., San Antonio.
Keating, Peter M., San Antonio.
King, Albert C., San Antonio.
*King, W. A., San Antonio.
Kitowski, C. B., San Antonio.
*Knoll, W. V., San Antonio.
Koerth, Chas. J., San Antonio.
*Kopecky, Jos., San Antonio.
*Kopecky, Leon C., San Antonio.
*Lehmann, C. Ferd, San Antonio.
Leopold, Henry N., San Antonio.
Letteer, C. Ralph, San Antonio.
Livingston, Chas. S., San Antonio.
Lochte, E. R., San Antonio.
Lowry, S. T., San Antonio.
Lundgren, R. W., San Antonio.
Lyon, Ervin F., Jr., San Antonio.
Magrish, Philip, San Antonio.
Manhoff, L. J., San Antonio.
*Martin, Frank M., San Antonio.
Matthews, John L., San Antonio.
Maxwell, Ernest A., San Antonio.
Maxwell, W. Wortham, San Antonio.
McCorkle, R. G., San Antonio.
*McCurdy, M. W., San Antonio.
McDaniel, Alfred C., San Antonio.
McGehee, Chas. L., San Antonio.
*McIntosh, J. A., San Antonio.
McPeak, Edgar M., San Antonio.
Merrick, Edward H., San Antonio.
*Milburn, Conn L., San Antonio.
Milburn, Kennedy A., San Antonio.
Miller, J. B., San Antonio.
Miller, John B., Jr., San Antonio.
*Miller, R. A., San Antonio.
*Minter, Merton M., San Antonio.
Mileau, Alexander, Jr., San Antonio.
Mitchell, H. C., San Antonio.
Moore, John M., San Antonio.
Moore, O. S., San Antonio.
Moore, S. Foster, Jr., San Antonio.
Mozersky, Victor, San Antonio.
Mueller, Edwin L., San Antonio.
Muldoon, W. E., San Antonio.
Nicholson, J. R., San Antonio.
*Nixon, Jas. W., San Antonio.
Nixon, P. I., San Antonio.
Nunn, J. A., San Antonio.
*O'Brien, Minnie C., San Antonio.
Ogilvie, H. H., San Antonio.
Orlando, A. M., San Antonio.
Pagenstecher, Gustav A., San Antonio.
Palmer, J. W., San Antonio.
Parker, T. T., San Antonio.
Parrish, Robert E., San Antonio.
Parsons, W. H., San Antonio.
Partain, R. A., San Antonio.
Paschal, Frank L., San Antonio.
*Paschal, Geo. H., San Antonio.
*Passmore, B. H., San Antonio.
Passmore, G. G., San Antonio.
Phelps, Gardner D., San Antonio.
Pinson, C. C., San Antonio.
*Pipkin, J. Lewis, San Antonio.
Pomerantz R. Bernard, San Antonio.
Post, S. Perry, San Antonio.
*Poth, Duncan O., San Antonio.
Potthast, Otto J., San Antonio.
*Pressly, T. A., San Antonio.
Pridgen, John L., San Antonio.
Pritchett, A. Belvin, San Antonio.
Ramsdell, M. A., San Antonio.
Reily, W. A., San Antonio.
*Reinarz, B. H., San Antonio.
Reveley, Jas. E. L., San Antonio.
Reveley, S. L., San Antonio.
Rhea, Robt. L., Jr., San Antonio.
*Rice, Lee, San Antonio.
Ritch, Allen, San Antonio.
*Roan, Omer, San Antonio.
Robbins, A. W. (Hon.), San Antonio.
Roberts, R. A., San Antonio.
Robertson, Wilber F., San Antonio.
Rosebrough, F. H., San Antonio.
Rosenzweig, Milton M., San Antonio.
*Ross, Lloyd I., San Antonio.
Ross, Rex R., San Antonio.
*Russ, Stirling E., San Antonio.
*Russ, W. B., San Antonio.
Russell, Dan A., San Antonio.
Saegart, August H., San Antonio.
*Sacks, David R., San Antonio.
Sample, Roy O., San Antonio.
Schorr, Arthur M., San Antonio.
Schwartzberg, Sam, San Antonio.
Scott, R. E., San Antonio.
*Scull, C. E., San Antonio.
Severance, Alvin O., San Antonio.
Sharp, Thos. H., San Antonio.
Shaw, Thad, San Antonio.
Shepherd, W. F., San Antonio.
Shipman, E. D., San Antonio.
Smith, Bernard F., San Antonio.
Soma, Yone, San Antonio.
Sparks, J. E., San Antonio.
Stansell, Paul Q., San Antonio.
*Stanton, Wm. P., San Antonio.
Steed, P. Frank, San Antonio.
Steinberg, Friedrich W., San Antonio.
Stieler, Albert, San Antonio.
Stout, B. F., San Antonio.

*Stuck, Walter G., San Antonio.
Sturm, Chas. E., San Antonio.
Sugg, W. R., San Antonio.
Sutton, Robt. S., Jr., San Antonio.
Sweet, Horace C., San Antonio.
*Swinny, Boen, San Antonio.
*Sykes, E. M., San Antonio.
Taylor, C. W., San Antonio.
Taylor, Sam H., San Antonio.
*Tennison, Chas. W., San Antonio.
*Thomas, Robt. P., San Antonio.
*Tipton, Van C., San Antonio.
Timmins, O. H., San Antonio.
*Todd, David Alfred, San Antonio.
Trevino, Saul S., San Antonio.
Tucker, Victor C., San Antonio.
Tullos, Hugh S., San Antonio.
*Venable, Chas. S., San Antonio.
Venable, J. Manning, San Antonio.
Watts, G. Graham(Hon.), San Antonio.
Watts, J. A., San Antonio.
Weatherford, E. W., San Antonio.
*Weiss, Victor J., San Antonio.
Whitacre, F. Stanley, San Antonio.
White, F. S. (Hon.), San Antonio.
Wiesner, Wm. Anthony (In.), San Antonio.
Williams, V. H., San Antonio.
Winter, John W., San Antonio.
Wolf, W. M., San Antonio.
Wolf, William M., Jr., San Antonio.
Worsham, John W., San Antonio
Wyatt, Byron W., San Antonio.
Wessels, Andrew, San Antonio.
Zink, Pearl Louise, San Antonio.

COMAL COUNTY MEDICAL SOCIETY

Alverson, Donald A., New Braunfels.
Bergfeld, Arthur W. C., New Braunfels.
Estess, Berthold H., Austin.
Frueholz, Bertha, New Braunfels.
Frueholz, Frederick, New Braunfels.
Hagler, Menan C. (Pres.), New Braunfels.
Hinman, Alexander J., New Braunfels.
Karbach, Hylmar E., New Braunfels.
Kliefoth, F. H., New Braunfels.
Reemtsma, Wm. (Sec.), New Braunfels.
Wright, Rennie, New Braunfels.

GONZALES COUNTY MEDICAL SOCIETY

Elder, N. A. (Pres.), Nixon.
Holmes, George, Gonzales.
Koontz, Arch C., Nixon.
Maness, John A. Gonzales.
Parr, Andrew B., Gonzales.
Sievers, Walter A., Gonzales.
*Stahl, Louis J. (Sec.), Gonzales.
Wilhite, Geo. W., Gonzales.

GUADALUPE COUNTY MEDICAL SOCIETY

Brandenberger, M. B., Seguin.
Douthett, Jas. C. B., Seguin.
Heinen. Allen I., Seguin.
Knolle, R. L., Seguin.
Knolle, R. L., Jr. (Sec.), Seguin.
Mannheimer, W. H., Seguin.
Poth, Norman A., Seguin.
Rabel, John E., Cibolo.
Raetzsch, Carl W., Seguin.
*Randolph, V. P. (Pres.), Schertz.
Stamps, Asa M. (Hon.), Seguin.
Williams, J. B., Seguin.

KARNES-WILSON COUNTIES MEDICAL SOCIETY

Archer, C. W., Floresville.
Blake, John V., Jr., Floresville.
Hammack, R. L., Kenedy.
Kent, C. M., Kenedy.
King, S. A. (Pres.), Karnes City.
Martin, R. G., Lavernia.
Oxford, J. W., Floresville.
*Quillian, Causey C., Kenedy.
Rushing, Holden, Runge.
Shannon, S. E., Karnes City.
Smith, Jas. W. (Dead), Poth.
Tiner, Edgar L. (Sec.), Poth.
Tritt, Earl F., Sells, Ariz.
Ware, Ella, Stockdale.

KERR-KENDALL-GILLESPIE-BANDERA COUNTIES MEDICAL SOCIETY

Birt, J. B., Harper.
Black, A. J., Kerrville.
Bredehoft, J. C., Rankin.
Butler, J. O., Bandera.
Domingues, P. J., Kerrville.
Erwin, John H., Burnet.
Feller, L. W., Fredericksburg.
Fickessen, W. R., Kerrville.
Gallatin, H. H., Kerrville.
*Gregg, Wm. Earl, Kerrville.
Harzke, O. F., Comfort.
Jackson, John D. (Sec.), Kerrville.
Jones, C. C., Comfort.
Keyser, L. L. (Pres.), Fredericksburg.
*Keidel, Victor, Fredericksburg.
*Knapp, D. R., Kerrville.
McClellan, C. L., Kerrville.
*Minsch, W. A., Kerrville.
Nooe, John F., Boerne.
Packard, Duan E., Kerrville.
Perry, James H., Fredericksburg.
Pfeiffer, H. G., Fredericksburg.
Phillips, Jim S., Rocksprings.
Reed, Ernest C., Legion.
Schwartze, Henry, Kerrville.
Swayze, H. Y., Kerrville.
*Thompson, S. E., Kerrville.
Wiedeman, J. E., Junction.
Woodall, J. B., Kerrville.

LA SALLE-FRIO-DIMMIT COUNTIES MEDICAL SOCIETY

Beall, Judson E., Pearsall.
Beall, Wendell E., Pearsall.
*Cook, John A., Cotulla.
Crawford, John M. (Pres.), Carrizo Springs.
Fay, H. W., Dilley.
Goodnight, J. E., Pearsall.
Howard, Elmer M., Pearsall.
Lightsey, J. N., Cotulla.
Lindley, C. D., Carrizo Springs.
*Pickett, B. E., Sr., Carrizo Springs.
*Pickett, B. E., Jr. (Sec.), Carrizo Springs.

MEDINA-UVALDE-MAVERICK-VAL VERDE-EDWARDS-REAL-KINNEY-TERRELL-ZAVALA COUNTIES MEDICAL SOCIETY

Bussey, J. W., Eagle Pass.
Butler, W. R., Crystal City.
*Cox, Geo. W., Austin.
Crossley, S. W., Del Rio.
Cunningham, Geo. B., Uvalde.
Donaldson, Elizabeth, Del Rio.
Eads, R. A., Uvalde.
Evans, Charles W., Jr., Del Rio.
Fielder, D. R., Uvalde.
Gates, Ellis F., Eagle Pass.
*Graham, R. N., Del Rio.
Guice, Leroy, Sabinal.
Johnson, Thomas M., Del Rio.
King, Otis, La Pryor.
*McWilliams, W. R., Del Rio.
Meredith, W. P., Del Rio.
Merritt, Geo. H., Uvalde.
Meyer, Walter B., Hondo.
Montemayor, B., Eagle Pass.
Montemayor, Raul M., Eagle Pass.
Myrick, C. R. (Hon.), Uvalde.
*Poindexter, Cary A., Crystal City.
Riddle, A. R., Eagle Pass.
Ross, Horace B., Del Rio.
Sanders Joe I., Del Rio.
Smith, W. H., Hondo.
*Smith, Wm. Arthur, Austin.
Urban, Kay B. (Sec.), Crystal City.
Utterback, Alvin P. (Pres.), Brackettville.
Williamson, R. D., Castroville.
Wood, Norman I., Uvalde.
Wood, Sterling C., Uvalde.
York, D. A., Del Rio.

SIXTH OR CORPUS CHRISTI DISTRICT

Dr. J. G. Webb, Mercedes, Councilor.

BEE-LIVE OAK-McMULLEN COUNTIES MEDICAL SOCIETY

Edmondson, John W., Beeville.
Gill, James P., Beeville.
Gipson, Corie D., Three Rivers.
Kirkland, Luman W., Beeville.
*LaForge, Hershall (Pres.), George West.
Lancaster, Howard E., Beeville.
McNeill, Scott E., Beeville.
Miller, Ernest E., Beeville.
Poff, Claude M., Tuleta.
Reagan, Tom B. (Sec.), Beeville.
Turner, Andrew J., Beeville.
Vanden Bossche, Leo J., Three Rivers.
Williamson, Chas. D., Three Rivers.

BROOKS-DUVAL-JIM WELLS COUNTIES MEDICAL SOCIETY

Allison, Albert M. (Sec.), Alice.
Appel, Myron H., Alice.
Atkinson, Newell W., Alice.
Bartlett, Glen, Sr., Falfurrias.
Bartlett, Glen, Jr., San Diego.
Behrns, Chas. L., Jr. (Pres.), Alice.
Dozier, Jos. V., George West.
Duran, C. Armando, San Diego.
Elliott, Richard C., San Diego.
Frank, Thelma E., Benavides.
Fultz, Benno H., Premont.
Garfias, Ramon Rocha, San Antonio.
Gaston, Earl, Falfurrias.
Joseph, Philip S., Alice.
Strickland, John H., Alice.
Winfield, Carra F., Alice.
Wyche, George G., Alice.

CAMERON-WILLACY COUNTIES MEDICAL SOCIETY

Amidon, Chas. S., Harlingen.
Amidon, Vivian M., Harlingen.
Andrews, T. P., Brownsville.
*Ashcraft, E. J., Harlingen.
*Baden, E. E., Raymondville.
Beech, Geo. D., Rio Hondo.
Bennack, Geo. E., Raymondville.
Bleakney, Phil A., Harlingen.
Breeden, R. F., Brownsville.
Caldeira, Frederick D., Harlingen.
Cannon-Bernfield, Helen, Tombstone, Ariz.
Carranza, Enrique M., Brownsville.
Cash, C. M., San Benito.
Conley, C. C., Raymondville.
Dashiell, Geo. R., Jr., Brownsville.
Davidson, N. A., Harlingen.
Davis, L. M., Harlingen.
Edgerton, Geo. W., Harlingen.
Eisaman, R. H. (Pres.), Brownsville.
Feener, Lester C., Harlingen.
Fox, I. G., Harlingen.
Gallagher, Geo. L., Harlingen.
Harris, Wyly H., Raymondville.
Jones, J. H., Raymondville.
*Kinder, Thurman A., Jr., Brownsville.
LaMotte, T. J., Harlingen.
Lamm, Anne Thea, La Feria.
Lamm, Heinrich, La Feria.
Lawrence, O. V. Brownsville.
Letzerich, A. M., Harlingen.
Lile, Henry A., Harlingen.
Lyle, C. F., San Benito.
Maxwell, Paul R., Harlingen.
Monger, Neal D., San Benito.
*Morris, E. T., San Benito.
Peek, John S., Brownsville.
Pope, Andrew J., La Feria.
Pollard, A. J., Harlingen.
Reed, Emil P. (Sec.), Brownsville.
Rentfro, James L., Brownsville.
Shafer, Troy A., Harlingen.
Sizer, Elmer M. A., Rio Hondo.
Smith, F. Nester, Harlingen.
Strawn, J. C., Lyford.
Tribble, J. J., Brownsville.
Utley, R. E., Harlingen.
Vinsant, W. J., San Benito.
Watkins, J. C., Harlingen.
Works, Bynum M., Brownsville.
Yantis, G. R., Brownsville.

HIDALGO-STARR COUNTIES MEDICAL SOCIETY

Balli, Carlos M., McAllen.
Bennett, Frank W., McAllen.
Berk, Ira J., McAllen.
Black, Roy C., McAllen.
Bowman, Newton H., Mercedes.
Brown, G. VanAmber (Pres.), McAllen.
*Burnett, Thos. R., Mission.
Caldeira, Anton Dias, Mercedes.
Casey, John B., McAllen.
Conard, John W., Pharr.
DeWitt, J. L., Mercedes.
Duncan, W. H., McAllen.
Edgerton, Mary Headley, Rio Grande City.
Fletcher, Hubert H., McAllen.
Frenzel, P. H., Donna.
Garcia, Octavio, McAllen.
Glass, T. W., Weslaco.
Guerra, Gilberto A., Edinburg.
Hamme, Curtis J. (Sec.), Edinburg.
Hamme, Ralph E., Edinburg.
Harrison, James G., McAllen.
Hatfield, Walter H., McAllen.
Heidrick, D. L., Mercedes.
*Lawler, Marion R., Mercedes.

Lockhart, J. P., Pharr.
Mannering, M., Alamo.
Marshall, U. S., Weslaco.
Martin, C. J., Rio Grande City.
May, Joe Wallace, Donna.
McCalip, E. L., Weslaco.
McKinsey, S. Joe, McAllen.
Montague, L. J., Edinburg.
Montgomery, J. E., Weslaco.
Moore, L. H., McAllen.
North, N. T., Mission.
Osborne, Alfred C., McAllen.
Osborne, Frank E., McAllen.
Reed, Earl, San Juan.
Rodriquez, M. J., Rio Grande City.
Schaleben, Harry O., Edinburg.
Scott, Kincy J., Pharr.
Smith, E. G., Mercedes.
Southwick, Lloyd M., Edinburg.
Tupper, Lewis N., Elsa.
Walker, Ottis, Mission.
*Webb, J. B., Donna.
*Webb, J. G., Mercedes.
Westphal, H. M., Weslaco.
*Whigham, H. E., McAllen.
Whigham, W. E., McAllen.
Wharton, Jas. O., McAllen.
Wilson, A. D., Mission.

KLEBERG-KENEDY COUNTIES MEDICAL SOCIETY

Allison, Henry, Kingsville.
Brown, Houston, Kingsville.
Harrison, Dan A., Jr., Kingsville.
Jones, Augustus C. (Pres.), Kingsville.
Peace, Dewey W. (Sec.), Bishop.
Sublett, Collier M., Kingsville.

NUECES COUNTY MEDICAL SOCIETY

Arnim, Landon C., Corpus Christi.
*Ashmore, Alvin J., Corpus Christi.
Baldwin, Harvey C., Corpus Christi.
Barnard, Wm. C., Corpus Christi.
*Bickley, Estil T. (Pres)., Corpus Christi.
Blair, J. V., Corpus Christi.
Carruth, W. E. (Hon.), Brownsville.
Carter, N. D., Corpus Christi.
Concklin, C. Louis, Corpus Christi.
*Connor, C. J., Corpus Christi.
Cope, S. F., Corpus Christi.
*Crain, Carroll F., Corpus Christi.
Danford, Edwin A., Corpus Christi.
Davisson, A. W., Corpus Christi.
Duff, J. C., Corpus Christi.
Eckhardt, Kleberg, Corpus Christi.
Edwards, Thomas W., Corpus Christi.
Ellis, Frank A., Corpus Christi.
Frashuer, William E., Robstown.
Friedman, Bernard B., Corpus Christi.
Furman, McIver, Corpus Christi.
Gaddis, H. W., Corpus Christi.
Garcia, Jose A., Corpus Christi.
*Garrett, Leslie M., Corpus Christi.
Gentry, W. H., Corpus Christi.
Gibson, Norman T., Robstown.
Giles, E. Jack, Corpus Christi.
Giles, Henry R., Corpus Christi.
*Gill, E. King, Corpus Christi.
Gray, Paul M., Corpus Christi.
Grossman, Bernard B., Corpus Christi.
Grossman, Dave N., Corpus Christi.
Grossman, Saul, Corpus Christi.
Guttman, L. P., Corpus Christi.
*Harrell, Travis M., Corpus Christi.
*Heaney, H. Gordon, Corpus Christi.
Heaney, Harry G., Corpus Christi.
Hearne, Chas. A., Corpus Christi.
Hoffpauir, A. C., Corpus Christi.
Hyder, Prentiss Lum, Corpus Christi.
*Jasperson, Clarence P., Corpus Christi.
Kemp, K. J., Corpus Christi.
Koch, A. A., Bishop.
Koepsel, Orlando S., Corpus Christi.
Martin, George E., Robstown.
Martin, Sterling B., Corpus Christi.
Mathis, Edgar G., Corpus Christi.
Meador, Clarence N., Corpus Christi.
Moller, G. Turner (Sec.), Corpus Christi.
Moody, Foy H., Corpus Christi.
Nast, Jerome, Corpus Christi.
Nichols, Ace E., Corpus Christi.
North, Arthur, Corpus Christi.
*O'Byrne, Geo. T., Corpus Christi.
*Perkins, Maury J., Corpus Christi.
Peterson, Oscar H., Corpus Christi.
*Pilcher, John F., Corpus Christi.
Portella, Adolf P., Corpus Christi.
Posner, Sidney, Robstown.
Priday, Cedric, Corpus Christi.
*Prothro, Ernest W., Corpus Christi.
Rosenheim, Philip, Corpus Christi.
*St. John, Ralph V., Corpus Christi.
Sharp, James C., Corpus Christi.
Shinn, A. Louis, Corpus Christi.
Sigler, Robert J., Corpus Christi.
*Sloan, Joe M., Corpus Christi.
*Sloan, John J., Corpus Christi.
Stewart, Charles D., Corpus Christi.
Stone, Belo, Robstown.
*Stroud, E. Frank, Corpus Christi.
*Stroud, Saunders K., Corpus Christi.
Swearingen, Robert G., Corpus Christi.
Thomas, John R., Corpus Christi.
Thompson, Burch, Corpus Christi.
Trimble, Theodore F. (Dead), Corpus Christi.
Watson, C. O., Corpus Christi.
White, H. A., Corpus Christi.
Williams, M. L., Robstown.
*Yeager, Charles P., Corpus Christi.

SAN PATRICIO-ARANSAS-REFUGIO COUNTIES MEDICAL SOCIETY

*Boykin, J. M., Taft.
Bull, John B., Aransas Pass.
Cockerham, Louis H., Sinton.
Cron, Chas. F., Rockport.
Curlee, Curtis L., Sinton.
*Dodson, W. M., Woodsboro.
Ewing, F. S., Sinton.
Flynn, Eugene, Refugio.
Glover, G. E., Austwell.
Guynes, W. A., Mathis.
Jenkins, Y. S., Taft.
Jones, Edgar F., Aransas Pass.
Kendrick, M. C., Ingleside.
Noble, Walter (Sec.), Aransas Pass.
Shipp, Henry H., Woodsboro.
Voss, A. H. (Pres.), Odem.
Woods, H. B., Refugio.
Zarsky, E. P., Refugio.

WEBB-ZAPATA-JIM HOGG COUNTIES MEDICAL SOCIETY

Austin, H. M., Laredo.
Candlin, George H., Laredo.
Canseco, F. M., Laredo.
Chapa-Badillo, Jesus, Laredo.
Cook, A. T., Laredo.
Crawford, J. L., Laredo.
Cigarroa, J. Gonzalez, Laredo.
de la Garza, Raul, Laredo.
Graham, S. H., Laredo.
Guerra, M. B., Hebbronville.
Halsell, J. T., Laredo.
Hamilton, H. J., Laredo.
Howard, Glenn T., Bruni.
Longoria, E. M., Laredo.
Lowry, Ruby S., Laredo.
Malakoff, Morris E. (Sec.), Laredo.
Montalvo, Lauro, Zapata.
Penny, Geo. E., Laredo.
*Powell, Wm. R. (Pres.), Laredo.
Puig, V. L., Laredo.
Rottenstein, Max, Laredo.
Sauvignet, E. H. (Hon.), Laredo.
Sherman, J. W., Mirando City.
Simpson, J. A., Laredo.
Standlee, T. H., Mirando City.
Ward, J. T., Laredo.
White, H. D., Monterrey, Mex.
Wright, Ray B., Laredo.

SEVENTH OR AUSTIN DISTRICT

Dr. R. T. Wilson, Austin, Councilor.

BASTROP COUNTY MEDICAL SOCIETY

*Bryson, J. Gordon, Bastrop.
Campbell, W. E., Elgin.
Fleming, Joe V., Elgin.
Hoch, Chas. Martin (Sec.), Smithville.
Kroulik, F. J., Smithville.
*Smith, Howard E., Austin.
Stephens, J. D. (Pres.), Smithville.
Wood, W. E., Elgin.

CALDWELL COUNTY MEDICAL SOCIETY

Benbow, Early A., Luling.
Coopwood, Joe B., Lockhart.
Du Boise, Otho K., Lockhart.
Henry, Harvey B. (Pres.), Luling.
Luckett, F. C., Fentress.
Nichols, H. Clay, Sr., Luling.
Nichols, H. Clay, Jr., Luling.
Nichols, Cranz, Maxwell.
O'Banion, J. T. (Sec.), Luling.
Pitts, Minor W., Luling.
*Ross, Alonzo A., Lockhart.
Ross, Abner A., Lockhart.
*Smith, Edgar, Lockhart.

HAYS-BLANCO COUNTIES MEDICAL SOCIETY

*Cooper, Arlin B., Ben Wheeler.
Currie, Reese F., Wimberly.
deSteiguer, John R. (Sec.), San Marcos.
Edens, Clarence, Tyler.
Edwards, Louis L., San Marcos.
Kealey, Edward T., Johnson City.
Lauderdale, Clay (Pres.), Buda.
Morton, John R., San Marcos.
Sowell, Rugel F., San Marcos.
*Van Ness, Julius M., San Marcos.
White, David L., San Marcos.
*Williams, Milton C., San Marcos.
*Williams, Wilburn C., San Marcos.

LAMPASAS-BURNET-LLANO COUNTIES MEDICAL SOCIETY

Allen, Geo. S., Burnet.
Bivins, L. L., Copperas Cove.
Black, D. W., Lampasas.
Brook, W. M., Lampasas.
Francis, W. D. (Hon.), Lampasas.
Gaddy, H. R., Lampasas.
Gray, G. L., Llano.
Hicks, J. T. (Hon.), Moline.
Hoerster, H. J., Llano.
Landrum, Marvin M., Lampasas.
*Nanney, A. L., Marble Falls.
*Rollins, H. B. (Pres.), Lampasas.
Shepperd, Joe A. (Sec.), Burnet.
Shepperd, R. L., Llano.
Vaughn, Thomas D., Bertram.
*Willerson, Wm. D., Lampasas.

LEE COUNTY MEDICAL SOCIETY

Burns, R. B. (Pres.), Giddings.
Mantzel, S. W. (Sec.), Giddings.
*Shivers, E. E., Lexington.
York, W. E., Giddings.

TRAVIS COUNTY MEDICAL SOCIETY

Auler, Hugo A., Austin.
Bailey, Thos. B., Austin.
*Beck, J. W. E. H., Austin.
Beverly, A. F., Austin.
Black, W. B., Austin.
*Bohls, S. W., Austin.
Brady, J. J., Austin.
Bratton, Robert, Austin.
Brown, M. I., Austin.
Brownlee, C. H., Austin.
Carter, C. E., Austin.
Castner, Chas. W., Austin.
Chrisman, Wm. P., Jr., Austin.
Clark, S. J., Austin.
*Clarkson, A. M., Austin.
Cloud, R. E., Austin.
*Coleman, Jas. M., Austin.
Coogle, Chas. P., Austin.
Cooper, R. A., Austin.
Cover, Ellen C., Austin.
Crowell, Caroline, Austin.
Darnall, Chas. M., Austin.
*Dashiell, Albert M., Austin.
*Davis, W. A., Austin.
Decherd, G. M., Austin.
Dildy, Chas. B., Austin.
Dyson, Thos. N., Austin.
Eckhardt, Joe C. A., Austin.
*Edens, Lee E., Austin.
Eppright, Ben R., Austin.
Esquivel, Sandy, Austin.
*Frobese, Joe R., Austin.
Gambrell, W. M., Austin.
Garcia, A. G. Austin.
Gentry, Elizabeth F., Austin.
Gibson, J. W., Austin.
Gilbert, G. H., Austin.
*Gilbert, Joe, Austin.
Gilbert, Joe Thorne, Austin.
Goddard, Walter C., Austin.
Gondolf, Harold J., Austin.
Granberry, H. B., Austin.
Granberry, Howard, Jr., Austin.
*Gregg, F. Banner, Austin.
Gregg, Frank C., Austin.
Gullette, J. Frank, Austin.
*Hardwicke, Chas. P., Austin.
Harper, H. W. (Hon.), Austin.
Herrod, Jas. Henry, Austin.
Hilgartner, H. L., Jr., Austin.
Holland, Lang F., Austin.
Houston, W. R. (Pres.), Austin.
Hudson, S. E., Austin.
Jackson, J. Warren, Austin.
Jaehne, R. J., Austin.
*Jordan, Robby C., Austin.
*Kelton, Wm. White, Jr., Austin.
Key, Sam N., Austin.

Klotz, H. L., Austin.
Kreisle, M. F., Austin.
*Lawrence, D. H., Austin.
Lippmann, Otto, Austin.
Loving, Jas. M., Austin.
Loving, Maribel, Austin.
Martin, C. A., Austin.
Mathews, C. A., Austin.
McCormick, Katherine, Austin.
McCrummen, Thos. D., Austin.
*McElhenney, Thos. J., Austin.
Miears, Claude H., Austin.
Morgan, W. P., Austin.
*Morris, Truman N. Austin.
Murray, R. V., Austin.
Neighbors, A. H., Austin.
Newman, H. W., Austin.
Nichols, J. R., Austin.
*Paine, Henry C., Austin.
Patterson, Elizabeth, Austin.
Perkins, H. Clay, Austin.
*Primer, B. M., Austin.
Rabb, V. S., Jr., Austin.
Richardson, Dalton, Austin.
Robinson, H. Leslie, Austin.
Robison, J. T., Austin.
Saldivar, Julian T., Austin.
*Scott, H. A., Austin.
Scott, Z. T., Austin.
*Standifer, C. H., Austin.
Suehs, P. E., Austin.
Swift, Edward V., Austin.
Taylor, Summerfield M. (Dead), Austin.
Terry, A. A., Austin.
Thomas, Harold R., Austin.
Thomas, J. C., Austin.
*Thornhill, G. F. (Sec.), Austin.
Watt, T. N., Austin.
Watt, W. E., Austin.
White, Ben O., Austin.
*White, Paul L., Austin.
Willerson, J. E., Austin.
Williams, Harriss, Austin.
Williams, W. E., Austin.
*Wilson, R. T., Austin.
Woolsey, S. A., Austin.
Wooten, Joe S., Austin.
*Zedler, Garland G., Austin.

WILLIAMSON COUNTY MEDICAL SOCIETY

Alexander, Margaret H., Taylor.
Atkinson, Ozias B., Florence.
Crawford, Clyde H., Thorndale.
Doak, Edmond (Pres.), Taylor.
*Doak, Edmond K., Jr., Taylor.
Feaster, Hezzie, Taylor.
*Foster, Charles C., Granger.
*Hopkins, Y. Frank, Taylor.
*Johns, Jay J., Taylor.
*Jopling, Julian L. (Sec.), Taylor.
Kirkpatrick, Bedford A., Taylor.
Kirkpatrick, S. B. (Hon.), Thrall.
Martin, John R., Georgetown.
Mikeska, Edward F. Taylor.
*Rice, Albert J., Georgetown.
Ross, George Duff, Liberty Hill.
Sharp, Milton R., Granger.
Stromberg, Eric W., Taylor.
Swanson, Wayland R., Taylor.
Wedemeyer, Wm. C., Walburg.
*Wheeler, Howard P., Georgetown.

EIGHTH OR DEWITT DISTRICT

Dr. Herman C. Eckhardt, Yorktown, Councilor.

COLORADO COUNTY MEDICAL SOCIETY

*Bell, Robt. H., Columbus.
Brohn, Alfred J., Columbus.
Cook, Chas. G., Weimar.
Giessel, J. W., Eagle Lake.
Kirkham, S. H., Columbus.
Laughlin, J. R. (Pres.), Eagle Lake.
Novak, L. F., Weimar.
Peters, Leo J. (Sec.), Schulenberg.
Potthast, A. H., Weimar.

DeWITT COUNTY MEDICAL SOCIETY

Allen, Geo. W., Jr., Yorktown.
Arnecke, C. A. H., Arneckeville.
Bohman, Alfred J., Nordheim.
Boothe, Sterling P., Cuero.
Brown, Harry H., Jr., Yoakum.
Brown, Harry H., Sr., Yoakum.
*Burns, J. Gillett. Cuero.
Cross, Geo. W., Yorktown.
Dobbs, James C., Cuero.
Douthit, Walter E., Cuero.
*Duckworth, G. Marvin, Cuero.
Eckhardt, Herman C. (Sec.), Yorktown.
Eckhardt, James W., Austin.
King, Gerald A., Cuero.
Milner, Robert M., Yoakum.
*Nau, Carl A., Austin.
Nowierski, Leon W., Yorktown.
O'Quin, C. Lafayette, Weesatche.
Prather, Frank Ault, Runge.
Richter, Louis B. S., Yoakum.
Wagner, Robt. G. (Pres.), Cuero.
Westphal, Corinne, Houston.
Westphal, Robt. Darwin, Yorktown.

FAYETTE COUNTY MEDICAL SOCIETY

Beckmann, Paul, La Grange.
Boelsche, Leslie D., La Grange.
Guenther, Frank J. (Pres.), La Grange.
Guenther, John C., La Grange.
Guenther, John G., La Grange.
*Levin, Gus, Fayetteville.
Luedermann, W. O., Schulenburg.
Miller, Arthur C., Carmine.
Moss, Robt. E. (Hon.), La Grange.
Schulze, Gene (Sec.), Schulenburg.

LAVACA COUNTY MEDICAL SOCIETY

Boyle, Jas. W. (Pres.), Shiner.
Dufner, C. T., Hallettsville.
Jaeggli, Sam, Moulton.
Kopecky, C. L., Yoakum.
Marek, E. H., Yoakum.
Pulkrabek, Emil J., Flatonia.
Renger, Harvey, Hallettsville.
Strieder, Hugo J., Moulton.
Wagner, F. M., Shiner.
Williams, Robt. W. (Sec.), Shiner.

MATAGORDA COUNTY MEDICAL

Allen, Frank W., Palacios.
Barbour, J. Lane, Bay City.
Dye, F. E., Bay City.
Guffy, Joseph L., Palacios.
Loos, H. H., Bay City.
Morton, A. S., Bay City.
Reed, J. W. (Hon.), Bay City.
Roche, B. F., Bay City.
*Shoultz, Chas. A. (Pres.), Bay City.
Simons, Bryan E. (Sec.), Bay City.
Wagner, J. R., Palacios.

VICTORIA-CALHOUN-GOLIAD COUNTIES MEDICAL SOCIETY

DeTar, Webb T., Victoria.
Ehlert, Edward, Jr., Victoria.
Gibson, Albert D., Port Lavaca.
Gunter, Jos. T., Goliad.
Hartwick, Fred W., Victoria.
Hicks, Jas. O., Victoria.
Hopkins, Jos. V. (Pres.), Victoria.
Lander, Roy S., Victoria.
Lester, Stanley W., Port Lavaca.
Mosley, R. A., Goliad.
Ogden, U. B., Victoria.
Roemer, Fred J., Port Lavaca.
Ryon, Oscar H., Seadrift.
*Sale, Walter W., Victoria.
Shields, Allan C., Victoria.
Shields, Fred B., Victoria.
Smith, David Heaton, Victoria.
Story, Jos. R. (Sec.), Victoria.
Ward, Rawley W., Victoria.

WHARTON-JACKSON COUNTIES MEDICAL SOCIETY

Bauknight, J. M., Ganado.
Blair, Wm. M., Wharton.
*Blasingame, F. J. L., Wharton.
Davidson, G. L., Wharton.
Davidson, T. L., Wharton.
Giddings, Harold D. (Sec.), El Campo.
Halamicek, J. A., El Campo.
Johnson, R. G., New Gulf.
Lincecum, A. L., El Campo.
Neal, T. M., Wharton.
Outlar, L. B., Wharton.
Reeves, H. V., El Campo.
Rugeley, Frank R., Wharton.
Rushing, John B., El Campo.
Schulze, Gustav A. (Pres.), El Campo.
Simons, J. W., New Gulf.
Weinheimer, Edmund A., El Campo.
Whitfield, Walter E., Edna.

NINTH OR SOUTHERN DISTRICT

Dr. Judson L. Taylor, Houston, Councilor.

AUSTIN-WALLER COUNTIES MEDICAL SOCIETY

Brown, Walter T., Wallis.
Gordon, Virgil, Sealy.
Hackfield, Alfred J., Industry.
Hover, Frank W., Sealy.
*Jones, Malcolm A. (Pres.), Hempstead.
Neely, Jubol A., Bellville.
*Roensch, Herbert E., Bellville.
Schmidt, Raymond J., New Ulm.
Steck, Otto E. (Sec.), Bellville.
Thiltgen, Winston S., Bellville.
Trenckmann, Otto A., Bellville.
Walker, Sidney C., Hempstead.

BRAZORIA COUNTY MEDICAL SOCIETY

Galloway, W. T., Freeport.
Greenwood, W. M., West Columbia.
*Hampil, C. C. (Pres.), Brazoria.
Hayes, G. J., Alvin.
Holt, Wm. C., Angleton.
*McCary, A. O., Freeport.
Merz, H. E., Alvin.
Reeves, Geo. D., Freeport.
*Stafford, Brooks (Sec.), Angleton.
Weems, M. A., East Columbia.

BURLESON COUNTY MEDICAL SOCIETY

Goodnight, Thos. L. (Pres.), Caldwell.
Jarrell, Norman D., Somerville.
Kozar, Joseph H., Somerville.
McGregor, J. C. (Hon.), Caldwell.
*Pazdral, Geo. V., Somerville.
*Siptak, John E. (Sec.), Caldwell.

FORT BEND COUNTY MEDICAL SOCIETY

Andrews, Frank A., Richmond.
*Ashmore, C. M., Sugarland.
Balke, John W., Rosenberg.
McGee, Bordon M., Rosenberg.
Nichols, C. V., Richmond.
Slaughter, Carlos A. (Pres.), Sugarland.
Weeks, John W., Rosenberg.
Yates, Charles W. (Sec.), Rosenberg.
Yates, John S., Rosenberg.
*Yelderman, Gus C., Rosenberg.

GALVESTON COUNTY MEDICAL SOCIETY

Andronis, Nicholas, Galveston.
Aves, Fred W., Galveston.
Azar, James A., Galveston.
*Barbato, Lewis, Galveston.
Beeler, Geo. W., Texas City.
*Bennett, James H. (Sec.), Galveston.
*Bennett, Ruth B., Galveston.
*Blocker, Truman G., Jr., Galveston.
*Bodansky, Meyer, Galveston.
*Bowen, Shirley S., Galveston.
Brady, Randle J., Galveston.
*Brindley, Paul (Pres.), Galveston.
*Cain, James C., Galveston.
Carroll, Mary V., Galveston.
Clark, Albert I., Galveston.
*Cone, Robt. E., Galveston.
Cooke, Willard R., Galveston.
*Curb, Dolph L., Galveston.
Danforth, Duncan R., Texas City.
*Decherd, Geo. M., Jr., Galveston.
*Delany, John J., Galveston.
DeMesquita, Paul B., Galveston.
*Duren, Norman, Galveston.
Eggers, Geo. W. N., Galveston.
Fisher, W. C., Jr., Galveston.
*Ford, Hamilton F., Galveston.
Fowler, C. Frederick, Galveston.
*Garbade, Francis A., Galveston.
*Griffin, Lawrence L., Galveston.
Harris, L. R., Galveston.
*Harris, Titus H., Galveston.
*Herrmann, Geo. R., Galveston.
*Hillsman, Joseph W., Galveston.
Hoecker, Wade L., Galveston.
Hooks, Charles A., Galveston.
Hyde, W. A., Galveston.
Jinkins, A. J., Galveston.
*Jinkins, J. L., Galveston.
Jinkins, Wiley J., Galveston.
*Johnson, Jesse B., Galveston.
Kahn, G. Mason, Galveston.
Klatt, Emil H., Galveston.
*Kleberg, Walter, Galveston.
Lee, George T., Galveston.

Lukens, Harry W., Dickinson.
Magliolo, Joseph C., Dickinson.
Manske, G. R., Texas City.
*Mares, Charles F., Galveston.
*Marr, William L., Galveston.
McLarty, E. S., Galveston.
McMurray, J. R., Galveston.
Moore, Robt. M., Galveston.
Parris, Beuford R., Galveston.
Patton, O., League City.
Perlman, Bernard, Galveston.
Prujansky, Nathan, Galveston.
Randall, Edward (Emer 3), Galveston.
Randall, Edward, Jr., Galveston.
*Reading, Wm. Boyd, Galveston.
*Robinson, H. Reid, Galveston.
*Schwab, Edward H., Galveston.
Sharp, Wm. B., Galveston.
Shaver, John S., Pearl Harbor, Hawaii.
*Sheckles, Lloyd W., Jr., Galveston.
*Singleton, Albert O., Galveston.
*Snodgrass, Samuel R., Galveston.
*Spies, John W., Galveston.
Spiller, W. F., Galveston.
*Starley, W. F., Galveston.
*Stone, Charles T., Galveston.
*Sykes, Clarence S., Galveston.
*Thompson, Edward R., Galveston.
Tomlinson, Lou Moore, Galveston.
*Towler, Martin Lee, Galveston.
*Van Zandt, Isaac L., Galveston.
Wall, Dick P., Galveston.
*Weinert, Herman, Jr., Galveston.
*Williams, Jarrett E., Galveston.
Wilson, Lucius R., Galveston.

GRIMES COUNTY MEDICAL SOCIETY

*Coleman, S. D. (Pres.), Navasota.
Greenwood, W. W., Navasota.
Hansen, Marius, Washington.
Harris, Gracchus C., Jr., Navasota.
Ketchum, E. T., Navasota.
Parker, M. E., Anderson.
Sanders, G. C., Richards.
Stewart, H. L. (Sec.), Navasota.

HARRIS COUNTY MEDICAL SOCIETY

Adam, Geo. F., Houston.
*Adams, Granville Q., Houston.
Agnew, J. H., Houston.
Alexander, Chas. S., Houston.
Alexander, H. L., Houston.
Alvarez, John A., Houston.
Ames, Frederick D., Houston.
Andrews, T. A., Jr., Houston.
Archer, Palmer M., Houston.
Armentrout, Coral R., Houston.
*Arnold, E. M., Houston.
Austraw, H. H., Houston.
Aves, C. M., Houston.
Axelrod, A., Houston.
Aydam, C. W., Houston.
Babcock, Darrow S., Houston.
Baird, V. C., Houston.
*Barker, W. E., Houston.
*Barnes, Frank L., Houston.
Barnes, J. Peyton, Houston.
Bartlett, H. L., Houston.
Bayer, Bernard H., Houston.
Bell, W. E., Houston.
Bennett, W. H., Humble.
Berry, Charles R., Houston.
*Bertner, E. W., Houston.
Best, Paul W., Houston.
*Billups, J. T., Houston.
Biscoe, Pat, Houston.
Blair, Lyman C., Houston.
Bloom, Fred A., Houston.
Bloom, Manuel G., Houston.
*Bloxsom, Allen P., Houston.
*Bonham, Russell F., Houston.
Bost, James R., Houston.
Bourdon, Lynn L., Houston.
*Bowen, Ralph, Houston.
Boyd, Adam N., Houston.
*Braden, A. H., Houston.
Bradford, F. Keith, Houston.
Brandau, Geo. M., Houston.
Brannon, J. G., Houston.
Bressler, J. L., Houston.
Brown, Jas. J., Houston.
*Brown, John W., Houston.
Brumby, Wm. M. (Hon.), Houston.
Bruder, Wood H., Houston.
Bruhl, Chas. K., Houston.
Bruhl, Daniel E., Houston.
Bryan, W. G., Houston.
Bukowski, Lucian M., Houston.
Burg, Abner D., Houston.
Burke, Thomas W., Houston.
Burns, Arthur, Houston.
Burr, Harry B., Houston.
Butaud, Russell S., Houston.
Butera, J. M., Houston.
Calaway, F. O., Houston.
*Calhoun, C. Alsworth, Houston.
Campbell, Walter D., Houston.
Caplovitz, Harry, Houston.
Carrico, Carl C., Houston.
Chandler, E. A., Houston.
Chunn, Edward K., Houston.
Clapp, J. Alston, Houston.
*Clark, W. A., Houston.
Clarke, H. H., Houston.
Clarke, J. E., Houston.
Clements, Stanley C., Houston.
Cockrell, John A., Houston.
*Cody, Claude C., Houston.
Cohen, Raymond, Houston.
Coleman, Catherine E., Pasadena.
Collette, Allen, Houston.
Collier, James L., Houston.
*Collins, Ray G., Houston.
*Compere, Tom H., Houston.
Cone, Frank, Houston.
*Conner, Edwin E., Pasadena.
*Connor, W. Harris, Houston.
Conte, Raphael, Houston.
*Coole, Walter A., Houston.
Cope, R. Louis, Houston.
Corbett, L. B., Houston.
Coulter, W. W., Houston.
*Cowart, E. M., Houston.
Coxe, Lemuel F., Houston.
Crapitto, Louis A., Houston.
Crigler, C. M., Houston.
Cronin, P. H. (Hon.), Houston.
Cruse, Percy R., Houston.
*Cummings, Hatch W., Jr., Houston.
Cunningham, Geo. N., Houston.
*Cutler, H. H., Houston.
Dailey, J. Emerson, Houston.
*Daily, Louis, Houston.
*Daily, Ray K., Houston.
Daniel, J. E., Houston.
David, Solomon D., Houston.
Davis, C. Q., Houston.
Davis, Hamlet I., Goose Creek.
*Dawes, Raymond, Houston.
Day, Geo. P., Houston.
Denman, B. H., Houston.
*Denman, Peyton R., Houston.
DeVore, Neal M., Houston.
*Dickson, J. Chas., Houston.
*Doak, N. P., Houston.
Dodge, Wm. E. (Hon.), Houston.
Donovan, Thos. J., Houston.
Dornak, F. K., Houston.
DuBose, J. B. (Hon.) Humble.
*Duggan, LeRoy B., Houston.
Duke, Herbert H., Goose Creek.
*Duncan, Clara K., Houston.
Dunkerley, A. K., Houston.
Dunnam, T. E., Houston.
Durham, Mylie E., Houston.
Durrance, Fred Y., Houston.
Dustin, H. E., Houston.
Dwyer, C. A., Houston.
*Ehlers, H. J., Houston.
Erhardt, Wm., Fairbanks.
Eidman, Frederick G., Houston.
Ekman, C. J. Ivan, Houston.
Elles, Norma B., Houston.
Elliott, E. E., Houston.
Elliott, M. L., Houston.
Embree, E. D., Houston.
Englehardt, H. A., Houston.
Farfel, Bernard, Houston.
Faris, Arthur M., Houston.
Farrish, G. C., Houston.
*Feagin, Horace C., Houston.
Filippone, John M., Houston.
Fitch, Edward O., Houston.
Fleet, Carl W., Houston.
*Flynn, James G., Houston.
Flynt, Otis P., Houston.
*Foote, Stephen A., Jr., Houston.
*Foster, Joe B., Houston.
Foster, Juanita E., Houston.
*Foster, John H., Houston.
Frachtman, H. J., Houston.
Freundlich, Thomas W., Houston.
*Gamble, J. F., Houston.
*Gandy, D. Truett, Houston.
Gandy, Joe R., Houston.
Gantt, Marvin A., Houston.
Gaston, John Z., Houston.
Gates, Charles S., Houston.
Gemoets, H. N., Houston.
*Glen, John K., Houston.
*Goar, E. L., Houston.
Gonzales, Angel G., Houston.
*Gooch, F. B., Houston.
Goodloe, N. Maxwell, Houston.
Goss, Jesse M., Houston.
*Graves, E. Ghent, Houston.
Graves, Joseph H., Houston.
*Graves, M. L. (Emer. 2), Houston.
Gray, E. N. (Hon.), Houston.
*Green, Chas. C., Houston.
Green, Wilbur K., Baytown.
*Greenwood, James, Sr., Houston.
*Greenwood, James, Jr., Houston.
*Greer, Alvis E. (Pres.), Houston.
*Greer, Cecil, Houston.
*Greer, Virgil David, Houston.
*Griffey, E. W., Houston.
*Griswold, C. M., Houston.
Grunbaum, Franz V., Houston.
Guthrie, Thomas Hall, Houston.
Haden, Henry C., Houston.
Haley, S. Willard, Houston.
Hallson, D. C. M., Houston.
Ham, Goldie S., Houston.
Hamilton, Carlos R., Houston.
Hancock, L. D., Houston.
Handley, L. L., Houston.
Hanna, Lester C., Houston.
Hannon, T. R., Houston.
*Hardy, Sidney B., Houston.
Hargrove, R. M., Houston.
Harris, C. P., Houston.
*Harris, Herbert H., Houston.
Harris, J. Wade, Houston.
Harris, T. Fred, Houston.
Harris, W. Weldon, Houston.
Hartgraves, Ruth, Houston.
Hauser, Abe, Houston.
Hayes, Herbert T., Houston.
Heard, J. Griffin, Houston.
*Hensley, B. C., Houston.
Hill, Austin E., Houston.
Hill, James A., Houston.
Hill, Jasper H., Houston.
Hill, Joel Milam, Houston.
Hinds, Gordon F., Houston.
Hodde, Louis F., Houston.
Hodges, J. E., Houston.
*Hoeflich, C. W., Houston.
Holland, Clell G., Houston.
Holland, T. L., Houston.
Hollimon, J. H., Houston.
Hollub, C. J., Houston.
Holsomback, J. C., Goose Creek.
Hooker, Lyle, Houston.
Hopkins, J. J., Brookshire.
Horowitz, Nathan, Houston.
*Hotchkiss, DeWitt H., Jr., Houston.
*Howard, A. Philo, Houston.
Huffman, M. M., Houston.
Hughes, F. M., Houston.
*Humphrey, Stanley G., Baytown.
Hutcheson, Allen C., Houston.
Iiams, Frank J., Houston.
*Israel, Sidney, Houston.
James, A. Judson (Hon.), Houston.
Janse, H. M., Houston.
Jaquish, Charles J., Houston.
Jerabeck, John D., Houston.
Johnson, Herman W., Houston.
Johnson, Seale I., Houston.
Johnston, Robert A., Houston.
Jones, J. T., Houston.
Jorns, C. Forrest, Houston.
Kalb, T. W., Houston.
Karbach, Nelson, Houston.
*Karnaky, Karl J., Houston.
Katribe, Paul, Houston.
Keiller, Violet H., Houston.
*Kendall, Dean H., Houston.
Kennedy, Edwin J., Houston.
*Kerr, Chas. D., Houston.
*Kilgore, F. H., Houston.
Kilgore, N. A., Houston.
Kincaid, H. L., Houston.
Kirkham, H. L. D., Houston.
Kirkpatrick, L. P., Houston.
Klanke, C. W., Houston.
Knolle, Ben E., Houston.
Knolle, Guy E., Houston.
Knox, Robt. W. (Hon.), Houston.
Kootsey, Jos. S., Houston.
Kreimeyer, J. H., Houston.
Kyle, J. Allen, Houston.
Lancaster, E. H., Houston.
*Lancaster, Frank H., Houston.
Langford, C. H., Goose Creek.
Lapat, William, Houston.
Larendon, Geo. W., Houston.
Latimer, M. H., Houston.
Lawrence, B. A., Houston.
*Lechenger, G. C., Houston.
Ledbetter, A. A., Houston.
Ledbetter, Paul V., Houston.
*Leggett, M. K., Houston.
Lerner, Ben L., Houston.
*Levy, M. D., Houston.
Leyva, Angel, Houston.

Ligon, J. G., Houston.
Lister, Sidney M., Houston.
Littell, Milton, Houston.
Little, A. A., Jr., Houston.
*Logue, L. J., Houston.
Lowe, Thos. E., Houston.
Ludeau, J. E., Houston.
Lummis, Fred R., Houston.
Mabry, J. D., Houston.
Madsen, Alva C., Houston.
Mangum, Hugh J., Houston.
Maresh, H. R., Houston.
Maresh, Rudolph E., Houston.
Marshall, Reagan M., Houston.
Marshall, Wm. E., Baytown.
*Martin, James R., Houston.
Mathews, J. F. (Hon.), Houston.
McConnell, Seth A. (Hon.), Houston.
*McCulley, Jacobus D., Houston.
McDaniel, W. S., Houston.
McFarling, J. Everett, Humble.
*McHenry, Rupert K., Houston.
McIndoe, Frank W., Houston.
McKay, H. E., Humble.
*McKay, H. E., Jr., Humble.
*McKeever, Duncan C., Houston.
McMeans, R. H., Houston.
*McMurray, Allen L., Houston.
McNeil, A. S., Houston.
*McReynolds, I. S., Houston.
McWilliams, Hamlin K., Waller.
Melton, Walter T., Houston.
Mendell, David, Houston.
Messer, J. N., Houston.
*Meyer, Henry S., Houston.
Meynier, Maurice J., Jr., Houston.
Miller, Arthur L., Houston.
*Milliken, Gibbs, Houston.
Mitchell, A. Lane, Houston.
Mitchner, James M., Houston.
Moch, P. J., La Porte.
Moers, Edwin A., Houston.
Mohle, F. D., Houston.
Molloy, James P., Jr., Houston.
Montgomery, Chas. F., Houston.
Mood, Geo. F., Houston.
*Moore, John T. (Emer. 1), Houston.
Moore, Simm H., Houston.
Motheral, J. D., Katy.
Mullen, Jos. A. (Hon.), Houston.
Myers, Claude D., Houston.
*Myers, Leonard A., Houston.
Mynatt, Arthur J., Houston.
Nester, Chas. R., Houston.
O'Farrell, John Mark, Houston.
O'Heeron, Michael K., Houston.
Oliver, J. Stanley, Houston.
Oliver, J. T., Houston.
*Orman, McDonald, Houston.
*Orr, Guy H., Houston.
*Overgaard, A. P., Houston.
*Owen, A. George, Houston.
*Page, J. Herbert, Houston.
Parish, Irving, Houston.
Park, James H., Jr., Houston.
Parker, Eugene M., Houston.
Parrish, Frank F., Jr., Houston.
Parsons, A. M., Houston.
Paton, Donald M., Houston.
Patrick, R. C., Houston.
Patterson, C. U. (Hon.), Houston.
Patterson, R. T., Houston.
Patteson, James L., Houston.
Pawelek, I. L., Houston.
Pawelek, L. G., Houston.
Peterson, Carl A., Houston.
*Petersen, Henry A., Houston.
Petri, Karin A., Houston.
Petway, M. E., Houston.
Phillips, Elliott, Houston.
*Phillips, John R., Houston.
Phillips, Leon, Houston.
Pipkin, Robt. W., Baytown.
Pittman, James E., Houston.
*Pope, A. E. C., Crosby.
Potter, L. E., Houston.
Poyner, Herbert F., Houston.
Pratt, W. M., Houston.
Priester, Wm. G., Houston.
*Prince, Homer E., Houston.
Pritchett, I. E., Houston.
Pugsley, Cornelius, Jr., Houston.
Purdie, Robt. M., Houston.
Qualtrough, Walter F., Houston.
Rader, John F., Houston.
Ralston, W. Wallace, Houston.
*Ramsey, Wm. E., Houston.
Raney, Lovel W., Houston.
Red, S. C. (Dead), Houston.
*Red, W. S., Jr., Houston.
*Reece, Chas. D., Houston.
Renfrow, W. Frank, Houston.
Robbins, E. Freeman, Houston.
Robertson, R. C. L., Houston.
Robey, Grace Lucille, Houston.
Robinett, J. B., Jr., Houston.
Robison, J. M., Houston.
Rohrer, Geo. E., Jr., Houston.
Rollins, W. J., Houston.
Ryan, Bert M., Houston.
*Ruiz, John J., Houston.
Rumph, Quah, Houston.
Sacco, A. C., Houston.
Salerno, Joseph P., Houston.
Salinger, Alfons, Houston.
Sanders, Chas. B., Houston.
Sanderson, Thos. A., Houston.
Sandlin, Jas. W., Humble.
Sansing, C. O., Houston.
Sansom, Geo. W., Houston.
Sappington, H. O., Houston.
Scardino, Peter H., Houston.
Schaffer, Elliott N., Houston.
Schaffer, Samuel S., Houston.
*Schilling, John G., Houston.
Schoepfer, Rene F., Houston.
Schultz, Jacob F., Houston.
Schuster, Louis C., Houston.
Scott, Daniel W., Houston.
*Seale, Everett R., Houston.
*Secrest, P. G., Jr., Houston.
Selders, Raymond E., Houston.
Sengelmann, Wilbur A., Houston.
*Shaw, E. N., Houston.
Sherrill, E. A., Jr., Houston.
*Shirley, Carl W., Houston.
Sinclair, T. A., Houston.
Slataper, F. J., Houston.
Smith, B. F., Houston.
Smith, Clifford T., Houston.
*Smith, E. T., Houston.
Smith, Fred B., Houston.
Smith, Y. C., Houston.
Snow, Wm. J., Houston.
Spiller, J. B., Houston.
Spivak, L. J., Houston.
Spurlock, G. H., Houston.
Stackhouse, Howard, Jr., Houston.
*Stalnaker, Paul R., Houston.
Steckler, M. I., Houston.
Sterling, Russell R., Houston.
Stevenson, W. M., Houston.
*Stokes, M. B., Houston.
Stone, Francis E., Houston.
Stork, W. J., Houston.
Stough, John T., Houston.
*Strassmann, Erwin O., Houston.
Strozier, W. M., Houston.
Stucki, J. M., Houston.
Synott, T. G., Houston.
Talley, A. T., Houston.
*Taylor, Judson L., Houston.
*Taylor, M. J., Houston.
Theriot, J. Roy, Jr., Houston.
Thoma, E. W., Houston.
*Thomas, Charles, Houston.
Thompson, B. D., Houston.
Thorn, J. W. (Hon.), Houston.
Thorn, S. W., Houston.
Thorning, W. B., Houston.
Tinsley, O. M., Houston.
*Trible, John M., Houston.
Truitt, J. J., Houston.
Tucker, J. Norris, Houston.
Turner, B. Weems, Houston.
Turner, Claude Gary, Houston.
*Turner, J. Harolde (Dead), Houston.
Tusa, Theo S., Houston.
Tuttle, L. L. D., Houston.
Vanzant, B. T., Houston.
*Vanzant, Thos. J., Houston.
Vaughan, L. M., Houston.
Wachsman, David V., Houston.
*Waldron, Geo. W., Houston.
*Walker, Joe D., Houston.
Wall, John A., Houston.
Wallis, Marshall, Houston.
*Warner, C. M., Houston.
Warner, Lucien M., Houston.
Weil, Sol B., Jr., Houston.
Weisiger, Ross W., Houston.
*Welsh, Hugh C. (Sec.), Houston.
Westmoreland, J. P., Houston.
White, Adair W., Houston.
Whitsitt, J. J., Houston.
Wible, D. J., Houston.
Wier, Warren M., Houston.
Wilkerson, B. J., Houston.
Wilkerson, E. A., Houston.
Williford, L. E., Houston.
Wills, Seward H., Houston.
Wilson, Carl S., Houston.
Wolf, Edward T., Houston.
*Wood, Martha A., Houston.
*Wootters, John H., Houston.
Wright, Elva A., Houston.
Wright, Ernest, Houston.
*York, B. P., Houston.
*York, J. B., Houston.
Young, Carl B., Houston.
*Youngblood, J. C., Houston.
Zarr, L. L., Houston.
Zax, Emile, Houston.

MONTGOMERY COUNTY MEDICAL SOCIETY

Bartell, Jack O., Conroe.
Corrigan, Joseph, Jr., Conroe.
Falvey, Thos. S., Conroe.
Hailey, Edwin B. (Pres.), Conroe.
Holland, W. M., Conroe.
Ingrum, W. P. (Sec.), Conroe.
Levins, James A., Huntsville.
Wilkins, A. N., Conroe.
Young, F. A., Montgomery.

POLK-SAN JACINTO COUNTIES MEDICAL SOCIETY

Bergman, S. H., Livingston.
Dale, John R., Jr., Corrigan.
Dameron, James H., Livingston.
Flowers, William W., Livingston.
Frink, Berton F. (Pres.), Corrigan.
Gardner, Thomas L., Livingston.
*Grimes, Ivison, Camden.
Hale, Douglas M., Cold Springs.
Murphy, Clarence S., Livingston.
Olive, Roy A. (Sec.), Livingston.
Pullen, William G., Corrigan.
Tackaberry, A. L. W. Humble.
Towns, James R. (Hon.), Livingston.

WALKER-MADISON COUNTIES MEDICAL SOCIETY

Anderson, E. W., Huntsville.
Angier, E. L., Huntsville.
Autrey, S. L., Trinity.
Barnes, Sam R., Trinity.
Black, Frank Ray (Pres.), Huntsville.
Briscoe, S. M., Trinity.
Burney, J. E., North Zulch.
Bush, L. Ewing, Huntsville.
Bush, L. H., Huntsville.
Cole, Chas. M., Madisonville.
Cole, Thos. C., Huntsville.
Curtis, M. E., Huntsville.
Eberle, Howard J., Madisonville.
Garrett, Jno. C., Huntsville.
Goodrich, William A., Huntsville.
Hanson, M. D., Huntsville.
Heath, J. B., Madisonville.
Martin, J. Ross, Huntsville.
McKay, J. A., Madisonville.
*Morris, J. E., Madisonville.
Thomason, Elizabeth C., Huntsville.
Thomason, John W., Huntsville.
Thomason, Robert H. (Sec.), Huntsville.
Thornton, Harold H., Trinity.
*Veazy, William B., Huntsville.

WASHINGTON COUNTY MEDICAL SOCIETY

*Hasskarl, Robert A., Brenham.
*Hasskarl, Walter F., Brenham.
Hodde, Fred H., Brenham.
Hodde, Herman O., Brenham.
Knolle, Roger E., Brenham.
Knolle, Waldo A., Brenham.
Kusch, G. A. L., Gay Hill.
Lenert, Robert H. (Pres.), Brenham.
Nicholson, Richard E., Brenham.
Roberts, Wm. J. L., Chapel Hill.
Schiller, Nelson L. (Sec.), Brenham.
Schoenvogel, Otto F., Brenham.
*Southern, Charles E., Burton.
Steinbach, Herbert L., Brenham.
Woolley, Talmage O., Brenham.

TENTH OR SOUTHEASTERN DISTRICT

Dr. A. E. Sweatland, Lufkin, Councilor.

ANGELINA COUNTY MEDICAL SOCIETY

Bledsoe, R. B. (Hon.), Lufkin.
*Burch, Joe S., Lufkin.
*Childers, Dave M., Lufkin.
Clark, Ed. T., Lufkin.
Clement, J. Carroll, Diboll.
Clements, Payton C., Lufkin.
*Denman, Linwood H., Lufkin.
Dillon, Oscar M., Lufkin.
*Estep, Marshall A., Lufkin.
Forrest, R. B., Huntington.

Gandy, Orren P., Lufkin.
*Gibson, Mitchell O. (Sec.), Lufkin.
Hawkins, J. W., Lufkin.
*Mathews, R. L., Lufkin.
McCasland, Clifford, Groveton.
Ostendorf, W. A., Washington, D. C.
Stewart, Chas. B., Huntington.
Stoval, W. R., Washington, D. C.
*Sweatland, A. E., Lufkin.
Taylor, Robt. W. (Pres.), Lufkin.
*Taylor, Thaddeus A., Lufkin.
Tinkle, L. T., Lufkin.
Wade, Jack H., Lufkin.

HARDIN-TYLER COUNTIES MEDICAL SOCIETY

*Anderson, W. W., Kountze.
*Barclay, Watt, Woodville.
Beazley, W. H., Silsbee.
Fowler, I. R. (Pres.), Silsbee.
Knight, John A., Voth.
Mann, James S., Colmesneil.
*McElroy, Robert B. (Sec.), Woodville.
Miller, J. S., Doucette.
Pope, Esca D., Hillister.
Roark, A. W., Saratoga.
Shivers, John F., Woodville.
Tate, R. A., Kountze.

JASPER-NEWTON COUNTIES MEDICAL SOCIETY

Blow, F. T., New Willard.
Hall, H. S., Newton.
Hardy, H. W., Jasper.
Kelly, W. R., Jasper.
Lockey, R. P., Bessmay.
*McCreight, W. F., Kirbyville.
McGrath, J. J. (Sec.), Jasper.
Richardson, A. J., Jasper.
Seale, J. N., Jasper.
Worthey, W. R. (Pres.), Call.

JEFFERSON COUNTY MEDICAL SOCIETY

Alexander, Hugh E., Beaumont.
Allison, F. Peel, Beaumont.
Autrey, A. R., Port Arthur.
Barr, R. E., Beaumont.
Bevil, H. Grady, Beaumont.
*Bevil, J. R., Beaumont.
Bevil, Lamar C., Beaumont.
Beyt, F. J., Port Arthur.
Bledsoe, J. A., Port Arthur.
Blum, S. L., Beaumont.
Boring, C. W., Port Arthur.
Brandau, W. H., Beaumont.
Broussard, J. A., Port Arthur.
*Brown, W. D., Beaumont.
Butler, Geo. L., Beaumont.
*Bybee, J. A., Beaumont.
Byram, Dan H., Port Arthur.
Carroll, Roland B., Port Arthur.
Carter, John H., Beaumont.
Chaisson, Mary, Beaumont.
*Chambers, B. F., Port Arthur.
Chunn, B. D., Beaumont.
Colby, Fred W. C., Beaumont.
*Crager, J. C., Beaumont.
Crumpler, W. E., Port Arthur.
Crumpler, W. E., Jr., Port Arthur.
Cunningham, M. A., Beaumont.
Darwin, P. S., Beaumont.
Eisenstadt, H. B., Port Arthur.
English, Dudley M., Beaumont.
Fears, T. A., Beaumont.
*Ferguson, Edward C., Beaumont.
Fertitta, J. J., Beaumont.
Fett, Bennie J., Port Arthur.
Fulbright, C. W., Port Arthur.
Fuselier, J. D., Port Arthur.
Gardner, John N., Beaumont.
Goldblum, Harvey H., Port Arthur.
*Graber, W. J., Beaumont.
Greenberg, Philip B., Beaumont.
Harlan, H. D., Beaumont.
*Hart, Frank B., Beaumont.
Hart, John A., Beaumont.
*Heare, L. C., Port Arthur.
*Hendry, C. H., Beaumont.
Hines, J. C., Nederland.
*Hosen, Harris, Port Arthur.
Ippolito, Vincent, Beaumont.
Jackson, J. M., Port Arthur.
Jones, Edmund D., Beaumont.
Jones, T. R., Beaumont.
*Killingsworth, W. Price (Sec.), Port Arthur.
Knight, Max J., Port Arthur.
*Knoepp, Louis F., Beaumont.
Laidacker, N. E., Nome.
Ledbetter, L. H., Beaumont.
*Lewis, Seab J. Beaumont.
Lindsey, Eugene H., Beaumont.
Loewenstein, Jos. M., Port Arthur.
*Long, James W. (Pres.), Port Arthur.
Lyons, S. B., Beaumont.
Mabry, Frank D., Port Arthur.
Makins, James, Port Arthur.
Mann, D. A., Beaumont.
Markewich, Jake, Beaumont.
*Martin, J. D., Beaumont.
Martin, T. W., Port Arthur.
*Matlock, Eugene W., Port Arthur.
Matlock, Thomas B., Port Arthur.
McAlister, F. E., Wiergate.
*Meyer, Paul R., Port Arthur.
Middleton, W. C., Beaumont.
Mills, E. D., Beaumont.
Orrill, R. Ray, Port Arthur.
Pace, B. F., Nederland.
Painton, Clifford E., Port Arthur.
Pate, S. J. (Hon.), Woodville.
Pecora, Tony L., Beaumont.
Pierson, Rogers, Beaumont.
Pitre, Roy Paul, Port Arthur.
*Powell, L. C., Beaumont.
*Pruit, L. T., Beaumont.
Raines, James Marion, Port Arthur.
Record, Joe, Beaumont.
Richardson, Bruce, Beaumont.
Robert, Pierre, Beaumont.
Robertson, Ernest, Beaumont.
Sappington, T. B., Port Arthur.
Serafino, L. C., Beaumont.
Shaddock, C. B., Jr., Beaumont.
*Sladczyk, George, Port Arthur.
Smith, John M., Port Neches.
*Smith, Wm. A., Beaumont.
Solis, G. R., Beaumont.
Stephenson, G. Bruce, Beaumont.
Stoeltje, Joe, Nederland.
Suehs, M. E., Jr., Beaumont.
Swonger, J. B., Beaumont.
Tatum, W. E., Beaumont.
Todd, Charles H., Jr., Beaumont.
*Tumbleson, Talbot A., Beaumont.
*Tyner, Furman H., Port Arthur.
Vaughan, Ben H., Port Arthur.
*Vaughan, E. W., Port Arthur.
*Walker, Taylor C., Beaumont.
Wallace, Wm. G., Beaumont.
Welch, J. G., Port Neches.
White, C. M., Beaumont.
White, J. M., Port Arthur.
Wier, D. S. (Hon.), Beaumont.
Wier, S. T., Beaumont.
*Williams, F. G., High Island.
Williford, H. B., Beaumont.
Willoughby, Russell C., Groves.
*Wilson, I. G., Beaumont.
*Young, I. T., Port Arthur.
Young, T. W., Jr., Port Arthur.

LIBERTY-CHAMBERS COUNTIES MEDICAL SOCIETY

Bell, J. E., Liberty.
Bellamy, Richard C., Daisetta.
Bevil, Jack, Hull.
Bridges, W. H., Mont Belvieu.
Carr, K. K., Devers.
Delaney, A. L., Liberty.
Engledow, Robt. H., Anahuac.
*Fahring, George H., Anahuac.
Griffin, Frank S., Liberty.
Leggett, Walter, Cleveland.
Lewis, Arthur N., Mobile, Alabama.
Richter, Ernest R. (Pres.), Dayton.
*Shearer, A. R., Mont Belvieu.
Smith, J. M., Rayburn.
Sykes, E. W., Anahuac.
Tadlock, J. T., Dayton.
Tucker, Eli J. (Sec.), Liberty.

NACOGDOCHES COUNTY MEDICAL SOCIETY

Barham, Geo. S. (Pres.), Nacogdoches.
*Beall, J. Frank, Nacogdoches.
Fuller, J. L., Garrison.
McKinney, Edgar P., Nacogdoches.
*McKinney, Mary Ann, Nacogdoches.
Middlebrook, Geo. F., Nacogdoches.
Nelson, A. Langston, Nacogdoches.
*Neuville, Carroll F., Nacogdoches.
Payne, C. M., Nacogdoches.
Pennington, Thos. J., Nacogdoches.
Rulfs, Carl H., San Augustine.
Smith, Clarence T., Nacogdoches.
Tucker, F. Henry (Sec.), Nacogdoches.
Tucker, Felix R., Nacogdoches.
*Tucker, Stephen B., Nacogdoches.

ORANGE COUNTY MEDICAL SOCIETY

Kaplan, H. J., Orange.
Lawson, F. W. (Sec.), Orange.
Pearce, H. W. (Pres.), Orange.
Phillips, C. E., Orange.
Thompson, L. O., Orange.

PANOLA COUNTY MEDICAL SOCIETY

Baker, Allen M., Carthage.
Baker, Charles D., Carthage.
Boren, S. Lawrence, Carthage.
*Carnathan, William G., Carthage.
Daniels, Z. L., Gary.
Hooker, Lynn C. (Sec.), Carthage.
Hull, Charles F. (Pres.), Carthage.
Perlman, Samuel, Carthage.

RUSK COUNTY MEDICAL SOCIETY

Abney, Thos. B., Overton.
*Allen, J. C., Henderson.
Birdwell, J. A., Overton.
Boswell, Wm. E., Henderson.
*Dawson, C. A. (Sec.), Minden.
*Dean, W. N., Overton.
*Deason, Lloyd S. (Pres.), Henderson.
Engle, C. G., Henderson.
Fleming, J. E., Henderson.
*Heiligman, Haskell, Overton.
Hilbun, Lynn, Henderson.
Lall, Shiam, Overton.
McNabb, J. F., Carlisle.
Parchman, H. W., Overton.
Ross, Griff, Mt. Enterprise.
Ross, J. E., Henderson.
Sadler, J. G., Henderson.
Shaw, R. F., Henderson.
Shipp, L. M., Henderson.
Suehs, H. A., Henderson.
Watkins, J. E., Henderson.
*White, W. P., Henderson.

SHELBY-SAN AUGUSTINE-SABINE COUNTIES MEDICAL SOCIETY

Copeland, Andrew G., Timpson.
*Ellington, John H., San Augustine.
Haley, Chas. R., San Augustine.
*Hurst, Thomas L., Center.
Oates, LeReid S., Center.
*Ray, John W., Timpson.
Warren, Walter M., Center.
*Warren, Wm. H. (Sec.), Center.
Warren, Wm. Spencer, Center.
Windham, John H., Shelbyville.
Windham. Wm. C. (Pres.), Center.

ELEVENTH OR EASTERN DISTRICT

Dr. A. L. Hathcock, Palestine, Councilor.

ANDERSON-HOUSTON-LEON COUNTIES MEDICAL SOCIETY

Barclay, Sam D., Crockett.
*Barrett, John H., Palestine.
Beeson, Sam P., Weldon.
Bing, Roland E., Oakwood.
Boggs, E. O. (Hon.), Spring.
Butler, Chas. W., Crockett.
*Carter, J. Weldon, Palestine.
Cole, W. A., Normangee.
Davis, W. E., Elkhart.
Dean, John L., Jr., Crockett.
*DuPuy, Alton J., Palestine.
Felder, Fred E., Palestine.
Funderburk, Wm. O., Elkhart.
*Hathcock, Alfred L., Palestine.
Haverlah, Harry A., Palestine.
Hester, Nell M., Buffalo.
Howard, Geo. R., Palestine.
Humphries, John T., Palestine.
Hunter, Ripley H., Palestine.
Hunter, Rush Q., Palestine.
*Joyce, Claude D., Jr., Palestine.
Kennedy, Sam, Grapeland.
*Link, Henry R., Palestine.
McCreary, J. S., Buffalo.
*McLeod, Robt. H., Palestine.
Moss, Geo. H., Frankston.
Paxton, Joe H., Elkhart.
Powell, E. P. (Pres.), Centerville.
Rogers, Joe, Normangee.
Scarborough, E. H., Poynor.
Speegle, A. Arthur, Palestine.
*Stokes, Paul B., Crockett.
Trice, Leroy (Sec.), Palestine.
*Wages, A. D., Palestine.
Wiernik, Harris, Lovelady.
Wootters, John S., Crockett.

CHEROKEE COUNTY MEDICAL SOCIETY

*Adams, Clyde, Rusk.
*Auerbach, Stewart H., Jacksonville.
*Bone, J. N., Jacksonville.
Burnett, E. W., Rusk.
Cobble, Thos. H. (Sec.), Rusk.
*DuBose, J. L., Wells.
Evans, Charles W., Fastrell.
Gray, D. F., Grand Junction, Colo.
Greenwood, J. T., Jacksonville.
Haynes, Elmer, Rusk.
Johnson, John F., Rusk.
Jones, Pearl E., Ponta.
Lamb, Marvin, Jacksonville.
McDaniel, I. H., Alto.
*McDougle, John B., Jacksonville.
*McDonald, W. A., Alto.
Moore, John W. (Hon.), Dialville.
Moseley, E. M., Rusk.
Ramsey, John B., Forest.
Redding, L. M., Jacksonville.
*Rowell, Robt. C., Rusk.
*Scarborough, J. S., Rusk.
Shaw, C. A., Rusk.
*Smith, Lawrence T., Rusk.
*Sory, W. H. (Pres.), Jacksonville.
Stripling, C. H., Jacksonville.
*Travis, J. M., Jacksonville.
Travis, L. L., Jacksonville.
*Travis, R. T., Jacksonville.
*Wheeler, M. S., Rusk.

FREESTONE COUNTY MEDICAL SOCIETY

*Davidson, J. D. (Sec.), Teague.
*Harrison, W. P., Teague.
Headlee, E. V. (Pres.), Teague.
McFadin, Wiley, Fairfield.
Sneed, W. N., Fairfield.

HENDERSON COUNTY MEDICAL SOCIETY

Baugh, J. F., Chandler.
*Cockerell, L. L., Athens.
Geddie, N. D., Athens.
Henderson, R. E. (Pres.), Athens.
*Hodge, R. H., Anthens.
Horton, A. C., Brownsboro.
*Kilman, P. T., Malakoff.
Moon, G. F., Chandler.
*Price, Don (Sec.), Athens.
*Schmitt, Herbert S., Malakoff.
Searls, John P., Malakoff.
Webster, John K., Athens.

SMITH COUNTY MEDICAL SOCIETY

Arthur, B. L., Lindale.
*Bailey, W. M., Tyler.
Bell, G. G., Tyler.
*Birdwell, J. Weldon, Tyler.
*Bradford, S. W., Tyler.
Braly, D. B. (Dead), Troup.
Brown, Glynne, Tyler.
Brown, Irving, Tyler.
*Bundy, D. T., Tyler.
*Caldwell, Elbert H., Tyler.
*Cherry, R. L., Tyler.
Clawater, E. W., Tyler.
Creel, G. A., Arp.
Cupp, C. D., Tyler.
*Dickson, J. R., Arp.
*Faber, Edwin G., Tyler.
*Faust, J. J., Tyler.
*French, Jacob P., Tyler.
Goldfeder, Jesse, Tyler.
*Jarmon, Thos. M., Tyler.
Livingston, J. J., Tyler.
McDonald, C. C., Tyler.
McMillan, Bruce, Tyler.
*Mitchell, John H., Tyler.
*Moore, M. H., Tyler.
*Neill, L. T., Tyler.
Pabst, Oscar C., Tyler.
Page, Roy L. (Pres.), Tyler.
Pope, Irvin, Jr., Tyler.
Pope, John H., Tyler.
Rhine, Leland R., Tyler.
Rice, Elbert D., Tyler.
Sehested, H. C., Tyler.
Shirley, Thos. Clayton, Tyler.
Smith, J. C., Winona.
*Thompson, Orion, Tyler.
Tubb, C. L., Arp.
*Vaughn, Edgar H., Tyler.
Walker, U. G. M., Bullard via Flint.
Whitten, S. J., Troup.
Willingham, C. E. (Sec.), Tyler.
Windham, L. B., Tyler.
Woldert, Albert, Tyler.
Young, Cuthbert B., Tyler.

TWELFTH OR CENTRAL DISTRICT

Dr. H. F. Connally, Waco, Councilor.

BELL COUNTY MEDICAL SOCIETY

Alsup, Ace H., Temple.
Anderson, Harold B., Temple.
Baird, Lester W., Temple.
*Bassel, Paul M., Temple.
Blanton, Bassel N. (In.), Temple.
Bradfield, Eldon O., Temple.
*Brindley, Geo. V., Temple.
Brown, Jesse B., Belton.
*Bunkley, Thelbert F., Temple.
*Chernosky, Wm. A., Temple.
Cooke, Mildred L., Belton.
Crumpler, Prentice, Jr., Temple.
*Curtis, Raleigh R. (Sec.), Temple.
*Curtis, Richard C., Temple.
DeLaureal, Thomas H., Temple.
Donnelly, Verner J., Temple.
Ellis, Ira D., Troy.
*Etter, Wm. F., Rogers.
Fowler, Joe A., Killeen.
*Frazier, Jacob M. (Hon.), Belton.
*Gober, Olin B., Temple.
*Gober, Olin F., Temple.
*Greenwood, Joseph H., Temple.
*Hammond, Fred M., Jr., Temple.
Harlan, Rudolph K., Temple.
Harlan, Wm. J. (Dead), Bartlett.
Howell, Floyd W., Temple.
Jenkins, Jesse G., Temple.
Kilman, Joseph R., Temple.
*Leake, Lucius B., Temple.
Lekisch, Kurt, Temple.
*Longmire, Victor M., Temple.
Maxwell, Walter J., Jr., Temple.
*McCelvey, John S., Temple.
*McDavitt, Bertha S., Temple.
*McElhannon, M. P., Belton.
Moon, Arthur E., Temple.
Noble, Robert W., Temple.
Owers, Albert, Temple.
*Phillips, Chas. (Pres.), Temple.
Pittman, John W., Belton.
*Pollok, Lewis W., Temple.
*Potter, Claudia, Temple.
*Powell, Wm. N., Temple.
Preston, Lewis F. (In.), Temple.
Ramey, Paul M., Temple.
*Robinson, James E., Temple.
*Rodarte, Jose G., Temple.
*Scott, Arthur C., Temple.
*Scott, Arthur C., Jr., Temple.
Sewell, Julian G., Belton.
*Sherwood, Marcel W., Temple.
*Simpson, Chas. M., Temple.
Speed, Terrell, Temple.
*Stevenson, Clyde A., Temple.
Stoeltje, Edward C., Rosebud.
Sutton, Robert S., Bartlett.
*Talley, Lewis R., Temple.
*Wallace, Benj. C., Jr., Temple.
*Wiedeman, Andrew E., Temple.
Winston, John R., Temple.
Wolf, A. Ford, Temple.
Wood, D. L., Killeen.
*Woodson, Burbank P., Temple.
Woodson, Warren B., Temple.

BOSQUE COUNTY MEDICAL SOCIETY

Blankenship, W. W., Mosheim.
Calhoun, James S., Meridian.
Cate, Clifton C., Morgan.
*Goodall, V. D., Clifton.
*Holt, R. D., Meridian.
*Long, A. M., Valley Mills.
Murray, James A., Walnut Springs.
Pike, A. N. (Pres.), Iredell.
*Shipp, J. R., Cranfills Gap.
Witcher, S. L. (Sec.), Clifton.

BRAZOS-ROBERTSON COUNTIES MEDICAL SOCIETY

Boguskie, W. M. (Pres.), Hearne.
*Cline, Wm. B., Bryan.
*Cummings, H. W., Hearne.
*Dodd, T. E., Bryan.
Ehlinger, R. B., Bryan.
Fox, Kermit W. (Sec.), Bryan.
*Grant, R. B., Jr., Bryan.
*Harrison, R. H., Jr., Bryan.
Holman, J. C., Franklin.
Hunnicutt, R. J., Bryan.
Marsh, J. E., College Station.
Parker, Wm. S., Calvert.
Perry, J. S., Bryan.
*Richardson, S. C., Bryan.
*Sanders, J. G., Bremond.
*Searcy, R. M., Bryan.
Searcy, T. A., Hearne.
Seastrunk, O. C., Franklin.
Slaughter, S. B., Bryan.
Taylor, Wm. C., Jr., Calvert.
Walton, T. T., Bryan.
*Wilkerson, L. O., Bryan.
Woodard, P. A., Bryan.

CORYELL COUNTY MEDICAL SOCIETY

*Brown, John T. (Pres.), Gatesville.
Hall, T. M., Gatesville.
Hamilton, J. H., Gatesville.
Lowrey, E. Elworth (Sec.), Gatesville.
Lowrey, M. W., Gatesville.

ERATH-HOOD-SOMERVELL COUNTIES MEDICAL SOCIETY

Barsh, Albert G. (Sec.), Stephenville.
*Bryan, T. F., Dublin.
Cragwall, A. O. (Pres.), Stephenville.
Currie, A. B., Lipan.
*Guy, W. H., Dublin.
Dabney, T. H. (Hon.), Granbury.
Jones, Dean B., Dublin.
Lankford, A. E., Stephenville.
Mulloy, J. J., Stephenville.
*Naylor, S. D. (Hon.), Stephenville.
Terrell, J. C., Stephenville.
*Terrell, Vance, Stephenville.

FALLS COUNTY MEDICAL SOCIETY

Avent, B. M., Rosebud.
*Barnett, J. H., Marlin.
Barnett, John B., Marlin.
Bennett, A. C. (Sec.), Marlin.
*Buie, N. D., Marlin.
*Carter, L. C., Marlin.
Collier, J. I., Marlin.
Currie, R. L., Rosebud.
*Curry, H. P., Marlin.
*Davidson, M. A., Marlin.
Garrett, H. S., Marlin.
*Glass, T. G., Marlin.
*Green, J. E., Kosse.
*Hipps, Herbert E., Marlin.
Hornbeck, A. C., Marlin.
Hutchings, Edgar P., Marlin.
Jansing, B. A., Lott.
Poshataske, Wallace, Marlin.
Shaw, F. H., Marlin.
*Smith, Howard O., Marlin.
*Smith, Walter S. (Pres.), Marlin.
Swepston, H. J., Rosebud.
*Torbett, J. W., Sr., Marlin.
*Torbett, J. W., Jr., Marlin.
Von Tobel, A. E., Marlin.
Watts, S. A., Marlin.

HAMILTON COUNTY MEDICAL SOCIETY

Chandler, C. E., Hamilton.
Cleveland, C. C., Hamilton.
Frank, C. H., Philadelphia, Pa.
Hall, Chas. M., Hico.
Hedges, Homer V., Hico.
*Kennedy, F. P., Carlton.
Kooken, Robt. A., Hamilton.
Talley, John E. (Sec.), Hamilton.
*West, Robt. C. (Pres.), Hamilton.

HILL COUNTY MEDICAL SOCIETY

Arledge, William I., Hillsboro.
Barnes, Livingston, Hubbard.
*Barnett, Thos. R., Hillsboro.
*Beskow, Richard N., Hillsboro.
Boyd, James E. (Sec.), Hillsboro.
*Campbell, Clark C., Itasca.
*Garrett, Chas. A., Hillsboro.
Hunt, John D., Aquilla.
*Mahaffey, Howard A., Hillsboro.
McDonald, J. Frank, Hillsboro.
McKown, James S. (Hon.), Osceola.
McPherson, A. B. (Hon.), Lovelace.
*McPherson, Garland, Itasca.
Sammons, Howard P., Hubbard.
*Shoemaker, L. Frank, Hillsboro.
*Smith, Ben C., Hillsboro.
*Smith, Nellins C. (Pres.), Hillsboro.
*Sims, Foster D., Abbott.
Treat, William F., Whitney.
Zacharias, O. Geo., Whitney.

JOHNSON COUNTY MEDICAL SOCIETY

*Anderson, C. C., Venus.
*Ball, W. P. (Pres.), Cleburne.
*Bradford, C. C., Godley.
Chorn, E. H., Joshua.
Cooke, C. C., Cleburne.
Edgar, C. L., Cleburne.
*Garner, A. F., Grandview.

Honea, T. C., Cleburne.
Jowell, C. C., Cleburne.
*Kimbro, R. W. (Sec.), Cleburne.
*Knox, M. T., Cleburne.
Menefee, W. E. (Hon.), Cleburne.
*Pickens, J. W., Cleburne.
Rudd, L. H., Burleson.
Stallcup, J. M., Cleburne.
*Washburn, W. R., Cleburne.
Yater, R. E. Lee, Cleburne.
*Yater, T. F., Cleburne.

LIMESTONE COUNTY MEDICAL SOCIETY

Alford, Lamar E. (Sec.), Groesbeck.
*Brown, Marion M., Mexia.
*Christoffer, O. T., Mexia.
Cox, J. W., Groesbeck.
Cox, Stanley, Groesbeck.
*Cromeans, R. E. (Pres.), Mexia.
Edgar, Cecil C., Mexia.
*McKenzie, C. P., Mexia.

McLENNAN COUNTY MEDICAL SOCIETY

*Alexander, Boyd D., Waco.
*Alexander, R. B., Waco.
Aynesworth, Kenneth H., Waco.
*Aynesworth, Horace T., Waco.
*Aynesworth, M. Brian (Sec.), Waco.
Baker, Marquez D., Waco.
Barnes, Maurice C., New York City.
Bell, Robert B., Waco.
Bidelspach, W. C., Waco.
*Bradford, J. C., Mart.
*Brooks, C. H., Waco.
*Bullard, Ray E., Waco.
*Burgess, John L., Waco.
*Cannon, I. F., Mart.
*Carlisle, Margil C., Waco.
*Catto, Chas. G., Waco.
*Coffelt, Ralph L. (Pres.), Waco.
Colgin, I. E., Waco.
Collins, Chas. E., Waco.
Collins, Clark T., Waco.
Collom, C. C., Mart.
*Connally, H. F., Waco.
*Crosthwait, R. Wilson, Waco.
*Crosthwait, Wm. L., Waco.
Davis, C. W., Waco.
*Dudgeon, Howard R., Sr., Waco.
*Dudgeon, Howard R., Jr., Waco.
Earle, Hallie, Waco.
*Edwards, Tom G., McGregor.
Germany, H. J., Waco.
Goodman, Aubrey L., Waco.
Hale, Joseph W., Waco.
Harrington, John T., Waco.
Hawkins, Beatrice W., Waco.
Hawkins, W. W., Waco.
Hoehn, F. Wm., Waco.
*Jaworski, H., Waco.
Jenkins, I. Warner, Waco.
*Johnson, Ernest A., Waco.
Kee, John L., Waco.
Kirby, Floyd F., Waco.
Klatt, Wesley W., Waco.
*Kochmann, Walter P., Waco.
Lankford, M. L., Mart.
Lanham, H. M. (Hon.), Biloxi, Miss.
Lattimore, John E., Waco.
Lovelace, Carl, Waco.
Manney, John E., San Antonio.
*Manske, A. O., Waco.
Mansfield, J. R., Waco.
Martin, J. E., Eddy.
*McCauley, E. R., Moody.
Milam, E. A., Waco.
*Miller, Garnett E., Corsicana.
Murphey, Paul C., Waco.
*Nail, W. R., Waco.
Naylor, L. F., Waco.
Oliver, Thos. M., Waco.
Pluennecke, P. C., Waco.
*Power, Paul H., Waco.
Rayburn, Clute E., Waco.
Reese, C. H., Waco.
Roddy, Louis H., Waco.
Sadler, Leslie R., Waco.
Scanio, Thos. J., West.
*Shipp, W. R. F., Lorena.
Simpson, Neill, Waco.
*Smith, Edward J., Waco.
*Souther, Wm. L., Waco.
Spencer, Shelby C., Waco.
Stanislav, Frank J., Waco.
*Tabb, T. E., Waco.
Thomas, H. P., Rusk.
Thompson, John, McGregor.
*Traylor, Clayton J., Waco.
*Trice, William G., Waco.
*Trippett, Horace H., Waco.
*Warren, Dan D., Waco.
Wells, W. Howard, Waco.
Wilkes, William O. (Hon.), Waco.
Witte, Wallace S., Waco.
*Wood, R. Spencer, Waco.
Wood, W. A., Waco.
*Woolsey, Fleta G., Waco.
*Woolsey, Henry U., Waco.
*Woolsey, W. J., Waco.

MILAM COUNTY MEDICAL SOCIETY

*Barkley, Thos. S. (Pres.), Rockdale.
*Brindley, Claunch G. (Sec.), Cameron.
Coulter, Hiram Thos. Rockdale.
Crump, Thos. Eugene, Cameron.
*Denson, Thos. Leland, Cameron.
*Epperson, Albert S., Cameron.
Fontaine, William Jas., Jones Prairie.
Hubert, Johnson S., Cameron.
Laurie, Ben Earl, Rockdale.
Newton, Wm. Rowland, Jr., Cameron.
Rischar, Eduard, Cameron.
Sessions, Isaac P., Rockdale.
Somer, Frank Alois, Cameron.
*Swift, Clifford Gibson, Cameron.
Taylor, G. B., Cameron.

NAVARRO COUNTY MEDICAL SOCIETY

*Bonner, Leslie L. Fairfield.
Bowmer, O. C., Corsicana.
Bristow, Wm. C., Emhouse.
Burnett, S. H., Corsicana.
*Carter, W. W., Corsicana.
*Currie, D. B. (Hon.), Kerens.
Daniel, J. S., Corsicana.
*David, John Wilson, Corsicana.
Evans, Edward L., Frost.
*Hamill, Dan B., Corsicana.
*Horn, Fred W., Wortham.
*Jester, Homer B., Corsicana.
Kelton, L. E., Sr., Corsicana.
Kelton, L. E., Jr., Corsicana.
Kuykendall, M. J., Wortham.
*Logsdon, W. K., Corsicana.
McClung, J. E., Corsicana.
Miller, Dubart, Corsicana.
Miller, Will M. (Pres.), Corsicana.
*Newton, Earl H., Corsicana.
Norwood, E. P., Corsicana.
Panton, H. H., Corsicana.
Sanders, Gurley H., Kerens.
*Shell, W. T., Sr., Corsicana.
*Shell, W. T., Jr., Corsicana.
*Sneed, W. R., Corsicana.
*Stroud, C. S., Jr. (Sec.), Corsicana.
Wills, T. O., Corsicana.
Worsham, A. B., Dawson.

THIRTEENTH OR NORTHWESTERN DISTRICT

Dr. T. C. Terrell, Fort Worth, Councilor.

BAYLOR-KNOX-HASKELL COUNTIES MEDICAL SOCIETY

Bunkley, John F., Seymour.
*Edwards, Thos. S., Knox City.
Eiland, D. Charles, Munday.
Emery, Oscar J., Rule.
*Foy, James W., Seymour.
Frizzell, Thos. P., Knox City.
Hudson, Isaac F. (Pres.), Stamford.
*Johnson, Charles E., Seymour.
Kimbrough, Earnest M., Haskell.
*Moch, J. Jerome, Dallas.
Newsom, Robert L., Munday.
Phillips, Gordon C., Haskell.
Rogers, Madison W., Rule.
Scott, Frank C., Haskell.
Taylor, William M., Goree.
Williams, Temple W. (Sec.), Haskell.
Youngblood, John W., Stamford.

CLAY-MONTAGUE-WISE COUNTIES MEDICAL SOCIETY

*Buchanan, E. B., Nocona.
Carmen, E. M., Vashti.
*Crook, L. F., Bellevue.
*Darwin, J. T., Decatur.
*Greer, Albert, Henrietta.
*Hilburn, R. E., Wichita Falls.
Inabnett, W. T. (Sec.), Decatur.
*Johnson, E. E., Montague.
Jones, B. M., Bridgeport.
*Lawson, J. T., Bowie.
Mood, Frank A., Nocona.
Patton, F. M., Bluegrove.
Petty, S. J., Decatur.
Riley, David C., Alvord.
*Rogers, T. G. (Pres.), Decatur.
Russell, W. L., Rhome.
Shaw, E. L., Boyd.
Tyler, R. E., Ringgold.
Vaughter, H. D., Byers.
Watson, O. M., Bridgeport.
*Wright, E. W., Bowie.

EASTLAND-CALLAHAN COUNTIES MEDICAL SOCIETY

Ball, D., Cisco.
Blackwell, Ed. C., Gorman.
Blackwell, Geo. T., Gorman.
Brown, L. C., Eastland.
Carter, Chas. H., Eastland.
*Caton, J. H., Eastland.
Clark, Floyd E., Cisco.
Cockrell, Chas. Roy, Baird.
Cogburn, Chas. C. (Sec.), Eastland.
Graham, E. L., Cisco.
Griggs, Robt. L., Baird.
Hale, Chas. S., Cisco.
Howard, Isaac M., Cross Plains.
Isbell, F. T., Eastland.
Jackson, C. L., Ranger.
Jackson, T. G., Carbon.
*Jackson, W. L., Ranger.
Kuykendall, P. M., Ranger.
Lee, Wm. P., Cisco.
Payne, Frank C. (Pres.), Rising Star.
Payne, Thos. E., Eastland.
Powell, Eli, Cross Plains.
Rogers, David V., Gorman.
Smith, John E., Weatherford.
Stubblefield, M. L., Gorman.
Waddell, Pearl, Cisco.
Weir, A. K., Ranger.

PALO PINTO-PARKER COUNTIES MEDICAL SOCIETY

*Allen, P. L., Weatherford.
*Bruce, R. G., Mineral Wells.
Garmany, J. F. (Hon.), Mineral Wells.
*Evans, Andrew J., Mineral Wells.
*Johnson, J. Edward, Mineral Wells.
*Lasater, Waldo B., Mineral Wells.
Lipscomb, Cuvier P., Mineral Wells.
*MacNelly, Chas. M., Weatherford.
McCloud, Ben L., Sr., Graford.
McCloud, Ben L., Jr., Graford.
*McCracken, J. H., Mineral Wells.
*Mincey, Julian N., Mineral Wells.
Patterson, A. M., Mineral Wells.
Pedigo, Paul C., Strawn.
Pedigo, Wm. S., Strawn.
*Roan, Leo N., Weatherford.
*Roberson, John F., Gordon.
Russell, E. M., Weatherford.
*Simmons, Phillip R., Weatherford.
*Smith, Robert H., Palo Pinto.
Williams, Chas. B. (Pres.), Mineral Wells.
*Williams, Chas R., Mineral Wells.
*Wolford, R. B., El Paso.
*Yeager, Edward F. (Sec.), Mineral Wells.
Yeager, Robert Lee, Mineral Wells.

STEPHENS-SHACKELFORD-THROCKMORTON COUNTIES MEDICAL SOCIETY

Berry, W. L., Throckmorton.
Cartwright, H. H., Brenckenridge.
Forrester, R. E., Moran.
Guinn, W. B. (Pres.), Brenckenridge.
Harrell, J. E., Throckmorton.
Kessler, Calvin, Breckenridge.
Murrie, R. G., Albany.
Parks, W. S., Brenckenridge.
Turner, C. A., Woodson.
*Webb, Wm. T., Breckenridge.
*Wood, G. C., Breckenridge.
*Wray, P. C., Breckenridge.
*Youngblood, D. J. R. (Sec.), Breckenridge.

TARRANT COUNTY MEDICAL SOCIETY

Allen, Daisy E., Fort Worth.
*Allison, Bruce, Fort Worth.
*Allison, J. A., Grapevine.
*Allison, Joe M., Emory.
*Allison, Wilmer L., Fort Worth.
Alspaugh, H. B., Duncan, Okla.
Anderson, J. V., Fort Worth.
*Anderson, R. B., Fort Worth.
*Andujar, John J., Fort Worth.
*Anthony, E. E., Fort Worth.
Anthony, F. H., Fort Worth.
*Antweil, A., Fort Worth.
*Armstrong, W. F., Fort Worth.
Axtell, E. C., Fort Worth.

*Baker, R. G., Fort Worth.
*Ball, Bert C., Fort Worth.
*Ball, Chas. E., Fort Worth.
*Barcus, W. S., Fort Worth.
Barker, Robt. C., Fort Worth.
*Barrett, I. P., Fort Worth.
*Barrier, C. W., Fort Worth.
*Beall, Frank C., Fort Worth.
*Beall, K. H., Fort Worth
*Beaton, Hugh, Fort Worth.
*Beavers, G. H., Jr., Fort Worth.
*Bennett, Jerrell, Fort Worth.
*Bobo, Zack, Jr., Arlington.
*Bond, Tom B., Fort Worth.
Bonelli, V. E., Fort Worth.
*Borough, L. D., Fort Worth.
Brasher, R. V., Fort Worth.
*Brewster, C. Burke, Fort Worth.
Brown, Arthur, Fort Worth.
Brown, J. Hyal, Fort Worth.
*Brown, W. Porter, Fort Worth.
*Burgess, R. M., Fort Worth.
*Bursey, E. H., Fort Worth.
*Campbell, J. Franklin, Fort Worth.
*Carpenter, N. C., Fort Worth.
*Chambers, James O., Fort Worth.
Cheatham, T. H., Fort Worth.
*Clayton, Chas. F., Fort Worth.
*Cochran, J. R., Fort Worth.
Coffey, Alden, Fort Worth.
*Cook, W. G. (Hon.), Fort Worth.
*Covert, J. D., Fort Worth.
*Crabb, M. H., Fort Worth.
Crawford, Wm. M., Fort Worth.
*Cross, T. J., Fort Worth.
*Cummins, J. B., Fort Worth.
Daly, Jack E., Fort Worth.
Davis, Edwin, Fort Worth.
Davis, J. Haywood, Fort Worth.
*Day, Giles W., Fort Worth.
Deaton, H. O., Fort Worth.
*Doss, A. Keller, Fort Worth.
*Dunn, Nelson L., Fort Worth.
Duringer, W. C., Fort Worth.
*Enloe, G. R., Fort Worth.
Eschenbrenner, J. W., Fort Worth.
*Foster, W. C., Handley.
Francis, F. W., Fort Worth.
*Funk, Theron H., Fort Worth.
Furman, Jack M., Jr., Fort Worth.
*Furman, John M., Fort Worth.
*Garnett, John W., Fort Worth.
*Garrett, C. C., Fort Worth.
Givens, J. M., Fort Worth.
*Godley, L. O. (Pres.), Fort Worth.
*Goldberg, A. I., Fort Worth.
Goldberg, Morton N., Fort Worth.
*Goodman, T. L., Fort Worth.
*Gough, R. H., Fort Worth.
Grammer, J. H., Fort Worth.
Greines, Abe, Fort Worth.
Greve, Anna M., Fort Worth.
Griffith, M. A., Fort Worth.
*Grogan, O. R., Fort Worth.
*Grogan, R. L., Fort Worth.
*Guerra, R. Lopez, Fort Worth.
*Hahn, W. B. (In.), Fort Worth.
Hall, E. P., Fort Worth.
Hall, E. P., Jr., Fort Worth.
*Hallmark, J. A., Fort Worth.
*Halpin, F. W., Fort Worth.
*Hancock, E. C., Arlington.
*Harper, H. W., Jr., Fort Worth.
*Harris, C. H., Fort Worth.
*Harris, Earl Fort Worth.
Havard, C. A., Fort Worth.
*Hawkins, C. P., Fort Worth.
Hayes, C. F., Fort Worth.
Helbing, H. V., Fort Worth.
Hewatt, J. W., Fort Worth.
*Hiett, Carey, Fort Worth.
*Higgins, W. P., Fort Worth.
*Hightower, L. P., Fort Worth.
*Hood, Grace H., Fort Worth.
Hook, C. O., Fort Worth.
*Hook, J. H., Fort Worth.
Horn, J. Morris, Fort Worth.
*Horn, Will S., Fort Worth.
*Howard, E. L., Fort Worth.
*Howard, Rex Z., Fort Worth.
*Howell, Wm. L., Fort Worth.
Huffman, A. M., Fort Worth.
*Hulsey, Sim, Fort Worth.
*Hyde, X. R., Fort Worth.
*Isaacks, Hub E., Fort Worth.
*Jackson, A. E., Fort Worth.
*Jackson, H. T., Fort Worth.
Jagoda, Samuel, Fort Worth.
*Jeter, T. M., Fort Worth.
Johnson, Clay, Fort Worth.
Kelley, J. A. (Hon.), Fort Worth.
Key, W. F. (Hon.), Fort Worth.
*Kibbie, Horace K., Fort Worth.
*Kibbie, Kent V., Fort Worth.
Kingsbury, H. B., Fort Worth.
*Kramer, J. T., Fort Worth.
*Lace, W. T., Fort Worth.
*Lackey, W. C., Fort Worth.
Lacy, G. W., Fort Worth.
*Ladd, A. D., Fort Worth.
Lange, A. A., Fort Worth.
Lawson, J. Mack, Fort Worth.
*Lees, C. R., Fort Worth.
Lenox, W. R., Keller.
*Littlepage, H. B., Fort Worth.
*Lorimer, W. S., Fort Worth.
Luckey, G. W., Austin.
Lyle, Judge M., Fort Worth.
*Mallard, R. S., Fort Worth.
*Marquart, Philip B., Fort Worth.
*Matheson, D. N., Fort Worth.
McCollum, C. H., Fort Worth.
McCollum, C. H., Jr., Fort Worth.
McKean, R. W., Fort Worth.
McKee, Frank, Fort Worth.
*McKenzie, Walten H., Fort Worth.
McKissick, J. F., Arlington.
McKnight, W. B. (Hon.), Mansfield.
McKnight, W. Hodges, Fort Worth.
*McLean, J. H., Fort Worth.
*McVeigh, J. F., Fort Worth.
*Mitchell, D. Gatlin, Fort Worth.
Morris, A. J., Fort Worth.
*Munter, Craig (Sec.), Fort Worth.
*Murchison, S. J. R., Fort Worth.
*Needham, R. H., Fort Worth.
*Neighbors, DeWitt, Fort Worth.
*Nesbit, Preston M., Arlington.
*Nies, W. B., Fort Worth.
*O'Bannon, R. P., Fort Worth.
*O'Reilly, J. J., Fort Worth.
*Ossenfort, W. F., Fort Worth.
*Ott, W. O., Fort Worth.
*Owen, May, Fort Worth.
*Parsons, W. F., Fort Worth.
Pescor, Michael J., Fort Worth.
*Phillips, O. M., Fort Worth.
*Phillips, W. G., Fort Worth.
*Ponton, A. R., Fort Worth.
Potts, John, Fort Worth.
*Powell, Eugene V., Fort Worth.
Price, S. A., Fort Worth.
*Pumphery, A. B., Fort Worth.
*Radtke, H. P., Fort Worth.
*Rathgeber, Van D., Fort Worth.
*Reeves, L. H., Fort Worth.
*Renshaw, H. S., Fort Worth.
*Richardson, J. J., Fort Worth.
*Roberts, A. D., Fort Worth.
*Roberts, A. L., Fort Worth.
Roberts, Lily, Fort Worth.
*Rogers, E. D., Fort Worth.
*Rogers, R. L. Cromwell, Fort Worth.
*Rozelle, Geo. F., Jr. (In.), Trudeau, N. Y.
*Rumph, Mal. Fort Worth.
Rumph, T. G., Fort Worth.
*Sanders, Frank G., Fort Worth.
Saunders, R. F., Fort Worth.
*Schenck, C. P., Fort Worth.
Schoolfield, E. C., Fort Worth.
*Schoonover, F. S., Fort Worth.
*Schwarz, E. G., Fort Worth.
*Scobee, R. G. (In.), Fort Worth.
Sewell, J. H., Fort Worth.
Shannon, J. B., Fort Worth.
Sheddan, Frank G., Fort Worth.
Shelley, Harold J., Fort Worth.
*Shoemaker, J. W., Fort Worth.
Siddons, Geo. Y., Fort Worth.
Smith, Frank P., Fort Worth.
Snyder, F. L., Fort Worth.
Spivey, J. L., Fort Worth.
Stanfield, J. A. (Hon.), Fort Worth.
Steger, J. H., Fort Worth.
*Stout, S. E., Fort Worth.
*Swift, W. B., Fort Worth.
*Tatum, W. C., Fort Worth.
*Taylor, Holman, Fort Worth.
*Terrell, C. O., Fort Worth.
*Terrell, C. O., Jr., Fort Worth.
*Terrell, T. C., Fort Worth.
Thomas, H. C., Fort Worth.
*Thomason, T. H., Fort Worth.
*Thompson, W. R., Fort Worth.
*Tottenham, J. W., Jr., Fort Worth.
*Touzel, C. S. E., Fort Worth.
Trigg, Henry B., Fort Worth.
*Trigg, Ross, Fort Worth.
*Tucker, J. T., Fort Worth.
Walker, Webb, Fort Worth.
*Waltrip, P. M., Jr., Fort Worth.
*Warwick, H. L., Fort Worth.
*Webb, Wm. S., Fort Worth.
Wells, Cora V., Rogers.
*West, W. B., Fort Worth.
*White, R. J., Fort Worth.
*Wier, E. M., Fort Worth.
Williams, Harold M., Fort Worth.
*Wilson, S. J., Fort Worth.
*Wise, J. R., Fort Worth.
Withers, I. A. (Hon.), Fort Worth.
*Woodward, C. S., Arlington.
Woodward, M. Lee (Hon.), Deming, N. M.
*Woodward, Valin R., Fort Worth.
*Wooten, J. H., Jr. (In.), Fort Worth.
Wyss, Herbert E., Keller.

WICHITA COUNTY MEDICAL SOCIETY

Adams, W. B., Wichita Falls.
Arrington, J. H., Jr., Wichita Falls.
Atkinson, Curtis, Wichita Falls.
Bailey, E. B., Wichita Falls.
Beckham, M. A., Wichita Falls.
Bishop, C. H., Wichita Falls.
*Bishop, Wm. A., Jr., Wichita Falls.
*Brown, Chas. H., Wichita Falls.
Carpenter, Philip A., Burkburnett.
Caskey, Marion W., Wichita Falls.
*Clark, Gordon G., Iowa Park.
*Collard, Felix R., Wichita Falls.
*Collins, B. R., Wichita Falls.
*Crump, Wm. E., Wichita Falls.
*Daily, Robt. W. L., Wichita Falls.
*Dorbandt, B. W., Wichita Falls.
*Egdorf, Otto C., Wichita Falls.
Fish, P. E., Electra.
Glover, L. A., Wichita Falls.
*Glover, M. H., Wichita Falls.
*Guest, J. C. A., Wichita Falls.
Hall, J. D., Wichita Falls.
Hanretta, A. T., Wichita Falls.
Hargrave, R. L., Wichita Falls.
*Hargrave, Robt L., Jr., Wichita Falls.
Hartsook, Chas R., Wichita Falls.
*Heyman, J. A., Wichita Falls.
Holland, L. B. (Pres.), Wichita Falls.
Hyde, T. L., Wichita Falls.
Johnson, Jas. A., Wichita Falls.
*Jones, Everett F., Wichita Falls.
*Kanatser, Jos. E., Wichita Falls.
Kiel, O. B., Wichita Falls.
*Kimbrough, O. T., Wichita Falls.
Knox, Roland F., Wichita Falls.
Landon, F. R., Wichita Falls.
*Leach, Austin F., Wichita Falls.
*Ledford, H. P., Wichita Falls.
*Lee, Q. B., Wichita Falls.
*Little, J. A., Wichita Falls.
Little, Jim Raymond, Wichita Falls.
*Lowery, W. P., Wichita Falls.
*Lynch, Thos C., Wichita Falls.
*Magnum, Carl E. (Sec.), Wichita Falls.
*Masters, Wallace J., Wichita Falls.
McConchie, R. D., Wichita Falls.
McCurdy, Thos C., Archer City.
Meredith, D., Wichita Falls.
*Monroe, Chas. W., Electra.
*Nail, J. B., Wichita Falls.
*Nelson, R. L., Wichita Falls.
Ogden, W. H., Electra.
Parker, W. L., Wichita Falls.
*Parmley, Tim H., Electra.
*Parnell, L. D., Wichita Falls.
*Pattillo, A. D., Jr., Wichita Falls.
Pierce, A. W., Wichita Falls.
*Powers, W. L., Wichita Falls.
Prichard, H. D., Wichita Falls.
*Reagan, John R., Wichita Falls.
*Robertson, D. Lyle, Wichita Falls.
*Rosenblatt, Wm., Wichita Falls.
*Russell, I. D., Burkburnett.
Seay, Joe A., Wichita Falls.
*Siebold, G. J., Wichita Falls.
Sims, W. P., Burkburnett.
*Singleton, Geo. T., Wichita Falls.
*Smith, P. K., Wichita Falls.
*Venable, D. R., Wichita Falls.
*Whiting, Walter B., Wichita Falls.
*Wilcox, C. A., Wichita Falls.
*Wilson, O. W., Wichita Falls.

WILBARGER COUNTY MEDICAL SOCIETY

Borchardt, Alvin L., Vernon.
Coleman, Wm. C., Vernon.
Dodson, J. E., Vernon.
*Flaniken, Barton D., Vernon.
Hollar, Emory D. (Pres.), Vernon.
*Juhl, Otto J., Vernon.
King, Thos. Albert, Vernon.
Miller, Bradford W. (Sec.), Vernon.
Moore, Wm. R., Vernon.
Muirhead, Jas. J., Vernon.
Reger, Howard J., Vernon.
*Rogers, Albert C., Vernon.
Stokes, Robt. C., Vernon.

YOUNG-JACK-ARCHER COUNTIES MEDICAL SOCIETY

Applewhite, H. L., Archer City.
*Baldwin, Alvin, Jr., Olney.
*Connor, Paul K., Jacksboro.
Edwards, B. F., Graham.
Fillmore, Rollin S., Jacksboro.
Griffin, B. B., Graham.
*Griffin, H. E., Graham.
Harrell, Fred S., Olney.
Hoch, Chas. M., Bryson.
Lovett, J. P. (Sec.), Olney.
*McClure, C. C., Jacksboro.
McKinney, H. C., Olney.
*Oates, K. D. (Pres.), Graham.
*Padgett, H. O., Dallas.
*Padgett, W. O., Graham.
Rosser, Virgil O., Graham.
Woods, David R., Olney.
Woods, John E., Megargel.

FOURTEENTH OR NORTHERN DISTRICT

Dr. M. L. Wilbanks, Greenville, Councilor.

COLLIN COUNTY MEDICAL SOCIETY

*Burt, J. D., Farmersville.
Burton, E. L., McKinney.
*Collins, J. S., Celina.
*Corry, A. C., Farmersville.
Croley, J. J., McKinney.
Davis, R. L., McKinney.
*Erwin, J. C., Jr. (Pres.), McKinney.
Harris, W. G., Plano.
Manning, W. N., Richardson.
*Mitchell, O. T., Plano.
*Morrow, R. E., McKinney.
*Robason, P. D. (Sec.), McKinney.
Shumway, Chas. M., McKinney.
*Walker, R. N., Celina.
*Wright, Will C., Farmersville.
Wysong, H. Dudley, McKinney.
*Wysong, W. S., McKinney.
Wysong, W. Scott, Jr., McKinney.

COOKE COUNTY MEDICAL SOCIETY

*Atchison, Jas. W., Gainesville.
Griffin, O. P., Gainesville.
Hardy, John, Gainesville.
Hawk, H. Patterson (Pres.), Gainesville.
*Higgins, David M., Gainesville.
Hughes, Chas. T., Gainesville.
*Kuser, Leroy W., Gainesville.
Mead, Ernest C., Gainesville.
*Myrick, Thos. S., Muenster.
Price, Jerry C., Boston, Mass.
*Rice, Lee Roy, Gainesville.
*Terry, H. H. (Sec.), Gainesville.
*Thayer, Claud B., Gainesville.
*Thomas, Ira L., Gainesville.
*Whiddon, Rufus C., Gainesville.
Yarbrough, Silas M., Gainesville.

DALLAS COUNTY MEDICAL SOCIETY

*Addison, R. P., Dallas.
*Alessandra, S. A., Dallas.
*Alexander, Jo C., Dallas.
Alexander, Lee J., Baltimore, Md.
*Alfieri, A. L., Dallas.
*Allday, Louie E., Dallas.
*Allen, Burton W., Dallas.
*Allison, Wilfred J., Dallas.
Anderson, L. R., Dallas.
Andrews, B. C., Dallas.
*Arnold, Geo. K., Dallas.
*Arnold, L. E., Dallas.
*Aronoff, B. L. (In.), Dallas.
*Aronson, H. S., Dallas.
*Ashby, John E., Dallas.
*Aten, Eugene L., Dallas.
*Ault, Chas. A., Jr. (In.), Dallas.
*Austin, Dale J. (In.), Dallas.
*Austin, Florence W., Dallas.
Baird, R. W., Dallas.
*Baird, S. S., Dallas.
Baker, Bryant O., Comanche.
Baker, John O., Dallas.
*Barr, Tom, Dallas.
*Barton, Robt. M., Dallas.
Basom, Wm. C. (In.), Rochester, Minn.
*Bass, Jas. W., Dallas.
*Beall, John R., Dallas.
*Beaver, N. B., Dallas.
Beddoe, R. E. (Hon.), Wuchow, China.
*Bell, Marvin D., Dallas.
*Bellamy, C. H., Dallas.
*Berger, B. J., Dallas.
*Black, J. H., Dallas.
*Black, W. A., Waco.
*Bland, Leonard F., Dallas.
*Blend, Max H., Dallas.
*Block, Cecil C., Dallas.
*Block, Harold M., Dallas.
Boone, M. A., Dallas.
*Bounds, Murphy, Dallas.
*Bourland, J. W., Dallas.
*Bourland, J. W., Jr., Dallas.
*Bowyer, Mack F. (In.), Dallas.
Boyer, L. A., Dallas.
*Bradfield, Jno. L., Dallas.
*Bradford, Wm. H., Dallas.
Brandau, Wm. W., Dallas.
*Brandenstein, Luise C. (In), Dallas.
*Brannin, Dan, Dallas.
*Brannin, E. B., Dallas.
*Brau, J. Gilmore, Dallas.
*Breihan, E. W., Dallas.
*Brereton, G. E., Dallas.
Brooks, Ernest J., Dallas.
*Brown, C. Frank, Dallas.
*Brown, Olen E., Dallas.
*Brown, S. Roland, Dallas.
*Browne, W. C., Dallas.
*Bruchsaler, Fred, Dallas.
Bruton, Emmett B., Dallas.
*Buchanan, J. F., Dallas.
Buckner, Kathryn, Dallas.
Buford, Ben R., Dallas.
*Bumpass, Stewart R., Dallas.
*Burgess, Geo. A., Dallas.
*Bush, Douglas M., Pallas.
*Bush, W. Holloway, Dallas.
*Bussey, C. D., Dallas.
*Butte, Felix L., Dallas.
*Byrom, Emmett T., Dallas.
*Bywaters, T. W., Dallas.
*Caillet, O. Rene, Dallas.
*Cairns, A. B., Dallas.
*Caldwell, Geo. T., Dallas.
*Caldwell, Janet A., Dallas.
*Calhoun, Nina Fay, Dallas.
*Calhoun, Thos. J., Dallas.
*Cantrell, Roy H., Dallas.
*Carlisle, Chas. P., Dallas.
*Carlisle, Geo. L., Dallas.
*Carlson, Glenn D., Dallas.
*Carman, H. Frank, Dallas.
*Carpenter, R. G., Dallas.
*Carrell, Brandon, Dallas.
*Carrell, W. B., Dallas.
*Carswell, W. E., Dallas.
*Carter, C. B., Dallas.
*Carter, Chas. F., Dallas.
*Carter, David W., Jr., Dallas.
*Carter, Earl L., Dallas.
*Cary, E. H., Dallas.
*Cheavens, Tom H., Dallas.
*Cinnamon, Alfred M., Dallas.
*Clark, Harold G., Dallas.
*Cochran, H. Walton, Dallas.
Cohen, Frank (In.), Dallas.
*Collier, Gates, Dallas.
*Cook, Thos. E., Dallas.
*Cookerly, Van, Dallas.
*Cooper, Wilford L. (In), Dallas.
*Copeland, Floyd R., Dallas.
Copeland, H. V., Grand Prairie.
Cowart, Robt. W., Dallas.
*Cox, Kelly, Dallas.
Crow, W. E., Dallas.
*Crutcher, Howard K., Dallas.
*Daniel, Ruby K., Dallas.
*Darrough, L. E., Dallas.
*Dathe, Richard A., Dallas.
*Davidson, G. A., Dallas.
Davis, David B., Dallas.
*Davis, J. Spencer, Dallas.
*Davis, Leo G., Dallas.
Dawson, Calvin D., Pueblo, Mexico.
*Dawson, J. L., Dallas.
*Deatherage, Wm., Dallas.
*Deatherage, W. R., Dallas.
*Decherd, H. B., Dallas.
*Denton, Guy T., Dallas.
*Denton, Guy T., Jr., Dallas.
*D'Errico, Albert P., Dallas.
*Devereux, Wm. P., Dallas.
*DeWitt, Robt. E., Dallas.
*Donald, Homer, Dallas.
Doolittle, H. M., Dallas.
*Dorman, J. H., Dallas.
*Dowis, J. M., Dallas.
*Downs, Jas. T., Dallas.
*Dozier, Fred S., Dallas.
*Driver, J. B., Dallas.
*Driver, Sim, Dallas.
*Duckett, J. Warner, Dallas.
*Duncan, Horace E., Dallas.
*Dunlap, Elbert, Dallas.
*Dunlap, Jas. Hudson, Dallas.
*Dunlap, John E., Dallas.
*Dunstan, E. M., Dallas.
*DuPuy, Howard B., Dallas.
*Edwards, Wm. L., Dallas.
*Embree, John W., Dallas.
*Estes, Ivan A., Dallas.
*Evans, W. G., Dallas.
*Fashena, Gladys J., Dallas.
Fetzer, Lewis W., Dallas.
*Finnegan, Chas. R., Dallas.
*Fisher, Thos. B., Dallas.
*Flynn, Chas. W., Dallas.
*Folsom, A. I., Dallas.
*Fowler, W. W. (Sec.), Dallas.
*Fox, Everett C., Dallas.
*Franklin, Floyd S., Dallas.
*Franklow, C. D., Dallas.
*Freedman, S. M., Dallas.
*Fry, Elma May, Dallas.
Fry, Murdock, D., Dallas.
Fuller, Wm. W., Dallas.
*Galt, Sidney, Dallas.
*Garrett, H. Grady, Dallas.
*George, Ella Mary, Dallas.
*Gessner, F. E., Dallas.
Gibbons, Olin W., Dallas.
*Gilbert, A. Clay, Dallas.
*Gilbert, Taylor C., Dallas.
*Giles, Robt. B., Dallas.
*Girard, Paul M., Dallas.
*Glass, Robt. J., Dallas.
*Goff, Gomer F., Dallas.
*Goforth, John L., Dallas.
*Goggans, Roy F., Dallas.
*Gold, H. Raphael, Dallas.
*Goode, John V., Dallas.
*Gordon, E. S., Dallas.
*Gottlich, Arthur P., Dallas.
Green, Tim R., Dallas.
*Greer, Bert E., Dallas.
*Griffin, Ben H., Dallas.
*Griffin, J. B., Dallas.
*Grigsby, C. M., Dallas.
Grow, Max H., Dallas.
*Hacker, Guy L., Dallas.
*Hackney, U. P., Dallas.
Halbouty, M. R. (In.), Kelly Field.
*Haley, Wm. E., Dallas.
*Hamilton, Lawrence E., Dallas.
*Hampton, J. A., Dallas.
*Hannah, Calvin R., Dallas.
*Harber, Harry P., Dallas.
Harder, Ira E., Dallas.
*Hardin, Abell D., Dallas.
*Hardin, Dexter H., Dallas.
*Harrington, S. F., Dallas.
*Harris, Alfred W., Dallas.
Harris, N. J., Dallas.
*Harrison, Ben F., Jr., Dallas.
*Harrison, G. G., Dallas.
*Hart, G. A., Dallas.
*Hawkins, Hubert F., Dallas.
*Hawley, J. Leeper, Dallas.
*Hay, Bruce H. H., Dallas.
Henderson, Walter T., Dallas.
*Hennen, J. C., Garland.
*Herndon, Jas. H., Dallas.
*Hill, Joseph, M., Dallas.
Hill, Samuel M., Dallas.
*Hilliard, Geo. M., Jr., Dallas.
Hodges, J. Shirley, Dallas.
*Holt, J. O. S., Jr., Dallas.
*Holtz. H. E., Dallas.
*Hopkins, May Agness, Dallas.
*Howard, Geo. W., Dallas.
Howard, Wm. E., Dallas.
*Howell, Jas. B. (In), Dallas.
Howser, John P., Jefferson Barracks, Mo.
Hudgins, B. E., Hutchins.
*Hudson, Wm. Lee, Dallas.
*Hurt, Leonard B., Dallas.
*Jablow, Harry B., Dallas.
*Jackson, Mary Ruth, Dallas.
Jackson, Reuben W., Dallas.
*Jackson, Rice R., Dallas.
*Jacobson, Harry B., Dallas.
*Jamison, Cyrus W., Dallas.
*Jenkins, Jno. L., Dallas.
*Jenkins, Speight, Dallas.
*Jones, Edwin L., Dallas.
*Jones, J. Guy, Dallas.
*Jones, Wm. D., Dallas.
*Kahn, Samuel H., Dallas.
Katz, S. M., Dallas.
Keller, L. L., Dallas.
*Kelley, Frank W., Dallas.
Kemp, Hardy A., Burlington, Vt.
*Kerr, Jack G., Dallas.
*Kilgore, Donald G., Dallas.
*Kindley, Geo. C., Dallas.
*King, Karl G., Dallas.
*Kinsell, Benj., Dallas.
*Kirksey, Thos. M., Dallas.
*Knickerbocker, B. A., Dallas.

*Knowles, W. Mood, Dallas.
Kolaczkowski, C. G. H., Dallas.
Kreymer, Geo. C., Dallas.
*LaDue, Chas N. (In.), Dallas.
*Lancaster, Mary Agnes, Dallas.
*Laugenour, Dudley P., Dallas.
*Lee, J. B. (In), Dallas.
*Lee, Ridings E., Dallas.
*Leeper, Edward P., Dallas.
*Levin, Paul M., Dallas.
*Levy, Harry R., Dallas.
*Light, Flominda, Dallas.
*Lindsay, Guion A., Dallas.
*Littell, Geo. S., Dallas.
Lively, Wm. M., Jr., Dallas.
LoBello, Leon C., Dallas.
Lockhart, Jessie A. (In), Dallas.
*Loftis, Earl L., Dallas.
*Long, W. E. (In), Dallas.
*Loomis, Edgar W., Dallas.
*Looney, W. W., Dallas.
*Lott, M. E., Dallas.
*Love, Thos. S., Dallas.
*Lubben, J. E., Jr., Dallas.
*Luecke, P. E., Dallas.
Lyday, Victor I. (In), Dallas.
*Lyon, Edward G., Dallas.
*Maddox, W. Gordon, Dallas.
*Maffett, Minnie L., Dallas.
Mahon, G. D., Dallas.
*Marchman, Oscar M., Dallas.
Marchman, Oscar, Jr. (In), Philadelphia, Pa.
*Marshall, Jas. H., Dallas.
*Martin, Chas. L., Dallas.
*Martin, J. M., Dallas.
*Martin, W. E., Dallas.
Martinak, Richard E. (In), Dallas.
*Mason, Porter K., Dallas.
*Massey, Warren E., Dallas.
*Mathews, Paul W., Dallas.
Matthews, A. A., Versailles, Mo.
Maupin, W. A., Rowlett.
Maxfield, J. R., Jr. (In), San Francisco, Cal.
*McBride, Dayton C., Dallas.
*McBride, R. B., Dallas.
*McCallum, Chas., Mesquite.
*McClung, Hugh L., Dallas.
*McCracken, J. H., Jr., Dallas.
*McCullough, M. K., Dallas.
*McDonald, Wm. D., Dallas.
*McFarland, Gordon B., Dallas.
*McGuire, Joseph H., Dallas.
*McIver, Julius, Dallas.
*McLaurin, Hugh L., Dallas.
*McLaurin, Jno. G., Dallas.
*McLeod, Jas. N., Dallas.
*McNeill, Arch J., Dallas.
*McPherson, V. L., Dallas.
*McReynolds, John O., Dallas.
*Mendenhall, Elliott, Dallas.
*Metz, M. Hill, Dallas.
*Miers, Edward M., Dallas.
Mikulencak, B. A. (In), Dallas.
*Miller, Tate, Dallas.
*Milliken, S. E., Dallas.
Mills, James T., Dallas.
Minnett, John S., Dallas.
*Mitchell, Joseph N., Dallas.
Montgomery, Jas. T., Dallas.
*Moore, S. Halcuit, Dallas.
*Moore, H. Leslie, Dallas.
*Moore, Ramsay H., Dallas.
*Moore, Robt. L., Dallas.
*Morris, A. Truett, Dallas.
*Moursund, W. H., Dallas.
Moursund, W. H., Jr., Dallas.
Muirhead, E. E. (In), Dallas.
*Muirhead, Sam J., Garland.
Murchison, Dan R., Dallas.
*Murphy, Jos. B., Dallas.
Myers, David V., Dallas.
*Nash, C. C., Dallas.
*Nelson, L. A., Dallas.
*Nesbit, Harold T., Dallas.
*Nesbitt, Irene T., Dallas.
*Neuman, Albert, Dallas.
*Newsom, Asa A., Dallas.
Newton, Cosette F., Dallas.
*Newton, Frank H., Dallas.
Nichols, Carl, Dallas.
Nitsche, Ernest W., Dallas.
*Norman, Floyd A., Dallas.
*O Brien, H. A., Dallas.
*O'Brien, J. D., Dallas.
*Ormsby, F. E., Dallas.
Owens, Ross (In.), Alexandria, La.
*Pace, John M., Dallas.
*Patterson, Casey E., Dallas.
*Patterson, Cecil O., Dallas.
*Park, B. E., Dallas.
Parks, Harold D., Lancaster.
Parks, S. N., Lancaster.
*Paternostro, C. J., Dallas.
*Peacock, Geo. E. (In), Dallas.
*Perkins, Jack F., Dallas.
*Perry, E. M., Dallas.
*Peyton, Jno. B., Dallas.
*Pickard, J. M., Dallas.
*Pickett, Taylor T., Dallas.
Pickett, W. F., Perryton.
*Pierce, James L., Dallas.
*Porter, Geo. L., Dallas.
*Potts, J. M., Dallas.
*Potts, Wm. H., Jr., Dallas.
*Powell, Homer, Dallas.
*Price, Harry S., Dallas.
*Quinn, Lester H., Dallas.
*Ramsdell, Robt. L., Dallas.
*Rattan, Paul M., Dallas.
*Ray, J. H., Dallas.
*Reaves, L. M., Dallas.
*Reddick, W. G., Dallas.
*Reuss, G. T., Dallas.
*Riddle, Penn, Dallas.
Riddler, G. A., Dallas.
*Rippy, Edwin L., Dallas.
Robertson, J. A., Dallas.
*Robinson, Wm. Lee, Dallas.
*Robinson, Wayne T., Dallas.
Rogers, Fred T., Dallas.
*Rogers, Paul A., Dallas.
Romines, Hillary, Garland.
*Rosenberg, M. L., Dallas.
*Rosenthal, R. S., Dallas.
*Ross, Edw. S., Dallas.
*Rosser, C. M., Dallas.
*Rosser, Curtice (Pres.), Dallas.
*Rouse, Milford O., Dallas.
Rowe, J. Forsythe, Dallas.
*Rubenstein, Bernard, Dallas.
*Rucker, John C., Dallas.
Rushing, E. O., Dallas.
*Sacher, Clarence B., Dallas.
*Sams, Lewis C., Dallas.
Scales, John G., Dallas.
*Scanland, Viola P., Dallas.
Schaub, G. A., Wilson.
*Schenewerk, Geo. A., Dallas.
*Schoch, Arthur G., Dallas.
*Schoolfield, Ben L., Dallas.
*Schuessler, W. W., Dallas.
*Schuett, Albert J., Dallas.
*Schwenkenberg, A. J., Dallas.
*Sebastian, F. J., Dallas.
*Seely, Marcus S., Dallas.
*Selecman, Frank A., Dallas.
*Sellers, Lyle M., Dallas.
*Shane, J. Howard, Dallas.
Shanks, Robt. C., Grand Prairie.
*Shannon, Hall, Dallas.
*Shaw, Robt. R., Dallas.
*Shea, Genevieve C., Dallas.
*Sheffield, L. B., Dallas.
*Shelburne, S. A., Dallas.
*Sheldon, Lawrence B., Dallas.
*Shelmire, J. Bedford, Dallas.
Shelton, A. M., Dallas.
*Short, Robt. F., Dallas.
*Shortal, W. W., Dallas.
*Shuey, Chas. B., Dallas.
*Silver, Lewis, Dallas.
*Simpson, C. W., Dallas.
*Singleton, J. D., Dallas.
Slaughter, Donald H., Dallas.
*Small, Andrew B., Dallas.
*Smith, Lois, Weir, Dallas.
*Smith, Ralph C., Dallas.
*Smith, Richard M., Dallas.
*Smith, Tom E., Dallas.
*Smith, Vinny L., Dallas.
*Smith, W. Edgar, Dallas.
Sorrells, C. C., Dallas.
*Sowers, Harry B., Dallas.
*Spangler, Davis, Dallas.
*Spence, Harry M., Dallas.
Stein, Justin J., Hines, Ill.
Stephenson, W. O., West Los Angeles, Cal.
*Stell, Cecil I. (In), Dallas.
*Stiles, J. C., Dallas.
*Stiles, Wendel A., Dallas.
Still, O. W. (In), Dallas.
*Stone, M. P., Dallas.
*Strother, E. B., Dallas.
*Strother, W. K., Dallas.
*Stuart, Samuel E., Dallas.
Sullivan, Rufus A., Dallas.
*Super, A. R., Dallas.
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Texas State Journal of Medicine

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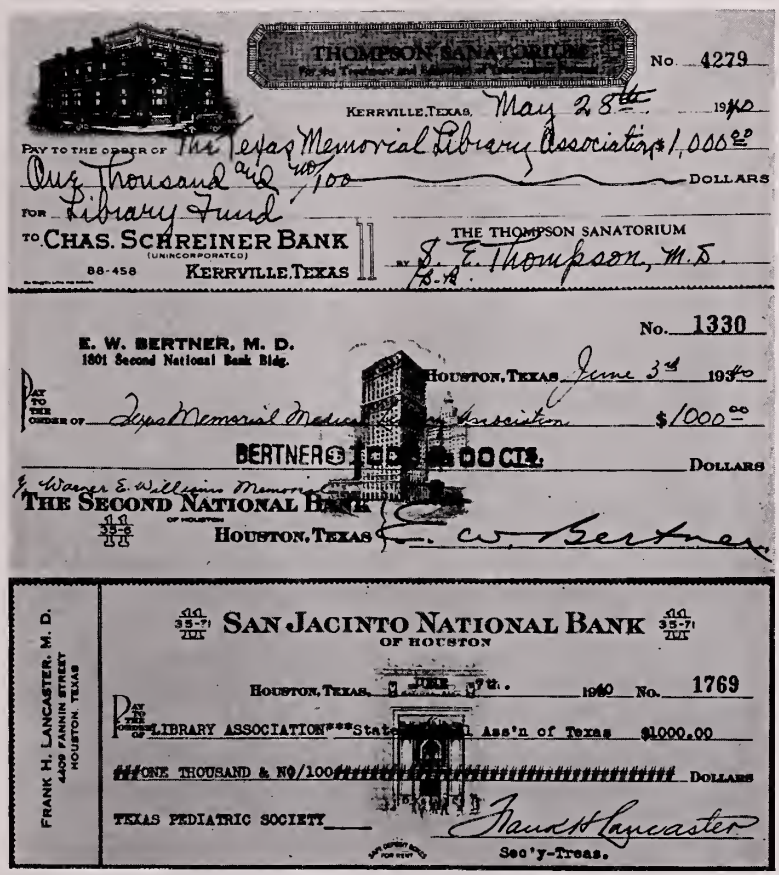
Vol. XXXVI **July, 1940** **No. 3**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

Texas Memorial Medical Library Association Endowments.—For those of our members who scanned the transactions of the Dallas annual session, published in the June number of the JOURNAL, and who read the editorials in that number, it is not news that a special organization has been perfected, the membership of which is limited to the Trustees of the State Medical Association of Texas, for the purpose of receiving endowment funds for the library of the Association. The transactions and the editorial referred to also recounted the fact that the Trustees had the promise of three endowments of $1,000 each from donors whose funds are named, as follows: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Frank H Lancaster
Sec'y-Treas.

Dr. and Mrs. Sam E. Thompson Memorial Fund, $1,000, donated by Dr. and Mrs. Sam E. Thompson, Kerrville.

Warner E. Williams Memorial Fund, $1,000, donated by Dr. and Mrs. E. W. Bertner, Houston.

Texas Pediatric Society Library Endowment Fund, $1,000, donated by the Texas Pediatric Society.

It is news, and big news, that these monies have actually been paid in by the donors; that all details of the Texas Memorial Medical Library Association organization have been completely effected, the final arrangements having been accomplished in a meeting of the Board of Trustees at the Association's offices in Fort Worth, June 30, and the funds above named officially set up. It is with great pleasure that the evidence of this significant

step in the development of a great medical library to serve the physicians and the public of Texas is presented herewith in the reproduction of the checks of the donors.

Dr. and Mrs. Thompson and Dr. and Mrs. Bertner enjoy a rare privilege in being the first individuals to have the vision and means to establish endowments which for all time henceforth will serve to make better doctors and a better medically served public in Texas. These funds will be invested by the Trustees in sound securities and kept intact, and each year the interest derived therefrom will be used in improving and developing the library.

Likewise, members of the Texas Pediatric Society of the year 1940, can take pride in the fact that their organization was the first special society or group to visualize and put to practical use some of the surplus monies that organization had accumulated for the specific purpose of promoting scientific advancement of medicine, and particularly pediatric medicine, in Texas.

Those who keep well abreast of affairs of the Association know that large amounts of money will eventually come to the Library as endowments, but these smaller endowments, by comparison, made now, are particularly welcome, not alone for their cash value, which will be a real help in improving the library service, but because they may perhaps point the way to others who would like to make enduring, useful contributions to Texas medicine.

It should be unnecessary to say that the Library of the Association offers service now to any reputable physician in Texas, whether or not a member, and that this service reaches into any town or community of the state into which Uncle Sam carries the mail. The Library is useful not only to doctors in preparing papers, but in everyday clinical practice, and in this way it serves a great humanitarian cause.

President Dr. Hunt has reappointed the following Library Endowment Committee, the purpose of which is to seek endowments for the Library: Dr. Sam E. Thompson, Kerrville, Chairman; Drs. E. W. Bertner, Houston; Ralph Homan, El Paso; Julius T. Krueger, Lubbock; J. M. Travis, Jacksonville. Any of our members who may be interested in this meritorious activity of the Association, or who know of any laymen who may be searching for a way to serve humanity, should communicate with some member of the Committee, or any member of the Board of Trustees. It is pertinent that funds so donated are subject to deduction from income tax up to 15 per cent of the net income.

Again we congratulate our pioneer donors, who have achieved for themselves a permanent place on the roster of those who shall contribute most to the advancement of scientific medicine in Texas.

The New York Meeting of the American Medical Association, as had been anticipated, turned out to be the largest meeting the Association ever held. The total attendance was 12,864. Naturally, a large attendance is expected when the organization meets in the centers of medical population, as was the case this time. However, and no doubt about it, the fact that the World's Fair was held over for this year proved the added inducement. The attendance from Texas was 123. That is not bad, considering the distances involved. Last year the attendance of Texas physicians on the St. Louis session was 219. At San Francisco, the year before, the attendance was 167, and at Atlantic City, the year before that, 99. In this connection, the registration of section preference showed 4,338 for the Section on the Practice of Medicine, 1,754 for the Section on General and Abdominal Surgery, and 864 for the Section on Obstetrics and Gynecology. These were by far the leading figures. That is about as they run in Texas.

The following Texas physicians participated in the scientific work, as indicated, naming them as they appear on the program:

Dr. George R. Hermann, Galveston, opened discussion on a paper by Drs. Fredrick A. Willius and J. P. English of Rochester, Minnesota, on the subject, "The Relation of the Use of Tobacco to Coronary Disease."

Dr. Everett L. Goar, Houston, was Vice-Chairman of the Section on Ophthalmology.

Dr. Chas. L. Martin, Dallas, presented a paper on "Radiologic Treatment of Metastatic Cervical Lymph Nodes."

Drs. Meyer Bodansky, J. L. Jinkins, H. Levine and A. J. Gilbert, all of Galveston, jointly presented a paper on "Clinical and Experimental Studies on Paraldehyde."

Dr. Titus H. Harris, Galveston, opened a discussion on a paper by Dr. Samuel D. Ingham of Los Angeles, on "Instinctive Motivations of Suicide."

Dr. C. F. Lehmann, San Antonio, was Secretary of the Section on Dermatology and Syphilology.

Dr. Leslie M. Smith, El Paso, presented a paper on "The Blastomycosis-like Infections." Dr. Smith also presented a scientific exhibit on "Blastomycosis and the Blastomycosis-like Infections," comprising charts, photographs, photomicrographs and drawings showing cultures of the more common organisms of this group and clinical photographs, together with the various blastomycosis-like mycoses briefly described and differentiated.

Dr. James Greenwood, Jr., Houston, presented an exhibit on "Spinal Epidural Varicosities and Thrombophlebitis," a series of sketches of normal anatomy of extradural plexus and their drainage; placards describing syndrome of epidural varicosities; drawings illustrating why posture has such an important role in aggravating or relieving symptoms; case reports with drawings illustrating the condition found at operation; roentgenograms of spine showing block by iodized poppy-seed oil, pedicle erosion, etc.;

summary of the results of operation; speculation as to etiology.

Dr. Frank H. Lahey of Boston, well known to many Texas physicians, an honor guest of our Association at its last annual session, was elected President.

Dr. Chevalier Jackson of Philadelphia, was given the distinguished service award, over Drs. James Ewing of New York, and Ludvig Hektoen of Chicago, both of whom were nominated for the honor.

The 1943 annual session will be held in San Francisco, California. It will be recalled that the locale of annual sessions of the A. M. A. is decided upon three years in advance. The meeting will be held next year at Cleveland, and the year following at Atlantic City.

Comment upon the success of meetings of the American Medical Association would seem rather beside the point, even superfluous. These meetings are always interesting, informative, and entertaining. Their scientific value is beyond comparison. It is wasteful. No one could begin to take advantage of any substantial part of it. However, out of the very plethora of good things no one who attends one of these meetings need go away without value received. New York was a shining example of what can be attained in every particular, the item of entertainment not by any means being the least of the good things offered. We are in the habit of thinking of New York people as being rather blasé, and not particularly concerned over the welfare of visitors. What visitors come to see is there, and if they do not get it it is their fault. There is some excuse for their attitude, whether or not we of the Old South think so. In the light of this opinion, it was a bit surprising to note how assiduously the medical profession of New York and New York City attended to their entertaining. They seemed to have discharged the obligation as never before, and it is our personal opinion that the obligation was discharged amply.

The House of Delegates at New York lived up to expectations. A large variety of important matters came up for consideration during the several meetings held by the House during the annual session, and they were all, without exception, given thoughtful and earnest consideration. The decision in each case appears to us to have been about as wisely made as could be expected under the circumstances. The following editorial is by way of a report from the Texas delegation. It has received the approval of each member thereof.

Texas was represented in the House of Delegates by Drs. Holman Taylor, Fort Worth; Guy F. Witt, Dallas, alternate for Dr. Felix P. Miller of El Paso, who could not attend because of the impending marriage of his daughter; Preston Hunt, Texarkana, alternate for Dr. S. E. Thompson of Kerrville, who could not attend because of the illness of Mrs. Thompson; H. R. Dudgeon, Waco; A. A. Ross, Lockhart, and E. H. Cary, Dallas. Dr. Taylor served on the Judicial Council, and Dr. Ross was a member of the Reference Committee on Credentials. Dr. Cary was chairman of the Legislative Committee of the Association.

The transactions of the House of Delegates will be found in full in the June 22 and June 29 numbers of *The Journal of the American Medical Association.* These transactions are worth reading, particularly at this time. Indeed, through such an expedient alone can we keep abreast with the progress of organized medicine as such.

Perhaps the most important business transacted by the House was that pertaining to the matter of military preparedness. It will be recalled that prior to the other World War the medical profession, anticipating eventualities, organized to meet them. Hence when the emergency arose, the medical profession was ready, or more nearly so than any other group in our country. The American Medical Association was promptly called upon by the government, and promptly responded to the call. More than 35,000 physicians served with the armed forces of the United States during that war, and 6,000 with the Navy. This group alone comprises 26 per cent of the medical profession of the country. Additional thousands served with a variety of boards, including those making physical examinations under the so-called draft. There was a Council on National Defense, and a Medical Section of that Council. There was a subordinate council in each state. This was pursuant to a federal law, and took the place of a similar committee organized by the American Medical Association and its constituent state associations. The service in Texas was rendered by a group headed by Dr. W. B. Russ of San Antonio, of which Dr. Holman Taylor was the secretary. Dr. Taylor was detached from his Regiment, where he was serving as a line officer, to assist Dr. Russ in carrying out the purposes of the movement, in which capacity he served for three months, being required at the end of that time to relinquish his duties to others and report to his Regiment. The plan set up in Texas, incidentally, was almost identical with that now proposed.

The chairman of the Board of Trustees of the A. M. A. very promptly, in a set of resolutions, asked the House of Delegates for

authority to offer the facilities of the Association to the government in the present anticipated emergency, and set up machinery similar to that which functioned so well during the preceding emergency. This resolution had hardly been presented and referred to a reference committee before the representative of the Army in the House of Delegates presented a tentative plan for the procurement of professional personnel for the Medical Corps of the Army, should it become necessary to greatly expand that corps. The plan had been prepared in the office of the Surgeon General. As just stated, this plan is very similar to the plan actually followed in Texas during the last emergency of the sort. We quote:

"1. The American Medical Association to be asked to conduct a survey of the medical profession through its state and local activities.

"2. The local or county societies to canvass their members to determine of those who express a willingness to serve who should be available for the military service and who, on account of their age, physical disability or commitment in civil capacities, should remain at home.

"3. The county society to give to each one who expresses his willingness to serve, even though he may be selected to remain at home, a button similar to that which was designed for the Volunteer Medical Service Corps during the last war.

"4. The county societies to list those who are selected for the military service according to their professional qualifications, listing as surgeons, psychiatrists and so on only those who are members of the national specialists' organizations. Also to select from those who are to remain at home qualified men for examining boards.

"5. The state societies to maintain an available roster of their members.

"6. The American Medical Association to maintain a numerical roster of availability by states.

"7. The Medical Department of the Army to have one or more selected officers on duty at the headquarters of the American Medical Association in Chicago.

"8. The War Department, Corps Area or regional officers to call on the American Medical Association for physicians or specialists, as and when required.

"9. The American Medical Association to call on the states, according to their quotas, for the physicians required.

"10. The states, in turn, to call on their local societies for their quota of physicians.

"In the quotas, credits would be given for sponsored units and preference would be given to reserve officers wherever their qualifications warrant.

"It appears that in the event of a national emergency of great magnitude it would be very necessary to conserve the medical profession. This plan would distribute the professional load and, if properly administered, should prevent the stripping of rural and isolated communities of their necessary medical personnel.

"There could be an extension of this plan to cover the training program for technicians. The same societies could conduct a survey of the teaching institutions to determine their availability and suitability for the training of such enlisted specialists as would be required. Rational medical service for civilian groups in war industries could be coördinated by the same administrative units."

This plan was referred to the reference committee to which the resolutions pertaining to the same matter presented by the Board of Trustees were referred. To make a long story short, the plan was unanimously adopted, and a committee appointed by the Speaker of the House of Delegates, to which was added an ex-officio group set up by the Board of Trustees, all in coöperation, of course. Taking the committee as a whole, there is one committeeman for each corps area. Dr. S. E. Thompson of Kerrville, was appointed from the corps including Texas. Dr. Irvin Abell of Louisville, Kentucky, was made chairman of the committee. Ex-officio membership comprises the President and Secretary of the Association, the Chairman and Secretary of the Board of Trustees, and the Editor of *The Journal of the American Medical Association.* The committee is entirely competent, and the job will, as before, be well done. We feel sure we can pledge the medical profession of Texas to hearty and complete support of the movement.

A resolution was introduced in the interest of the American Medical Women's Association, at the time, calling upon the government to extend recognition to women physicians in the form of commissions and ratings, as in the case of male physicians. The resolution was received sympathetically, but referred to the committee having the entire matter in charge.

A resolution was also introduced, calling for the same military status and pay to the physical therapy technicians who are now in the army, and who may be called into the army during emergency, as now extended to nurses. This resolution was also sympathetically received, and was referred to the permanent committee.

A resolution calling upon constituent state associations and component county medical societies, to work out plans whereby some protection would be given the practice of physicians called into the service, and perhaps some remuneration therefrom, was referred to the committee.

A telegraphic request from the National Medical Association, the national organization of Negro physicians, that Negro physicians be included in any plans set up for the procurement of physicians for the armed forces in the anticipated emergency, was referred to the Committee on Medical Preparedness, which is the name generally accorded the permanent committee under discussion.

An interesting side-light was thrown on the situation by a statement made by the Secretary of the Canadian Medical Association, who was present as a guest. He advised

that 90 per cent of the members of the Canadian Association had placed their services at the disposal of the Canadian Government, only about 800 physicians in the country declining to volunteer for this service.

A resolution, presented by Dr. J. N. Baker of Alabama, called for the closest coöperation between the medical profession and health authorities in the effort to control venereal diseases, and recommending that physicians who serve in the various venereal disease clinics be compensated for their services. This resolution was adopted.

A Utah resolution called for compensation of the family physician for the care and treatment of patients in the low income brackets, provided that any plan approved for this purpose be under the direct supervision of practicing physicians, and not of specialists in public health. The resolution was approved in principle, but attention was called to the report of the reference committee on the Wagner National Health Bill, made at the St. Louis session, last year, stressing the fact of local determination as to need, and the desirability of following the philosophy of the American form of government in setting up any such service.

From the Section on Pathology and Physiology, came a resolution recommending to state associations that they confer with authorities in their respective states having to do with such matters, with the view of limiting the type and extent of service offered by governmental laboratories. The resolution held that such services should be confined to requests made by health officers, and by physicians whose patients find it difficult or impossible to pay the cost of required laboratory service; that, in general, such laboratories should not provide services at tax-payers' expense for persons who are able to provide for themselves. The resolution was passed on to state associations, with the admonition that they see to it that any attempt to correct the evils cited does not unwittingly interfere with the control of communicable disease.

Michigan asked for the coördination through the Bureau on Medical Economics, of medical service plans set up by the several states, and for the collection by the Bureau of information and data useful to all concerned. This resolution was approved, and the principles pertaining to medical service plans previously adopted were reiterated and re-emphasized. Those in charge of such plans in the several states where they are being formulated or operated, do their part in distributing helpful data with reference thereto.

It will be recalled that the problem of fee schedules was referred to the Bureau of Medical Economics at the St. Louis session, for consideration of several important factors involved. The Bureau reported that often-times situations require the adoption of fee schedules, under which circumstances it can hardly be said that the act is a violation of the principles of medical ethics; that when so adopted, they should always set up the purpose for which they are designed, the bodies which are to pay for the service concerned, the ability of the patient to pay, the length of time in which the schedules are to remain effective, the economic conditions in the area involved, and the nature of medical service to be provided, and that there should always be sufficient elasticity to permit their adaptation to wage levels, to specialized service and variations in the costs of providing medical care in urban and rural districts. The fact that the adoption of such fee schedules is the function of the component county medical societies, was emphasized. This view of the situation was approved by the House of Delegates, with the statement that the fewer the fee schedules, the better for all concerned.

The committee on legislative activities of the Association, in its very excellent report, had a good deal to say about medical service under the Farm Security Administration. Special reference was made to the plan of pooling funds to cover this service. It will be recalled that in the beginning the pooling of funds for the purpose under consideration was forbidden. The Council on Medical Economics of the State Medical Association of Texas included this provision in the contract it made with the Farm Security Administration people. When it became known that the funds were being pooled in spite of this provision, and observing that the plan worked fairly well, and apparently to the satisfaction of the county medical societies concerned, and in view of the changed position of the American Medical Association with regard to such matters, nothing was said about it. A paragraph from the report above mentioned is pertinent in this connection:

> "This pool plan is practical for physician and patient. The physician is available when protracted illness develops and when the family under ordinary circumstances could not afford to pay. It also distributes individual cost of medical care over many families, so that cost of severe illness to one family can be more nearly equalized. The heart of the program lies in a clear understanding by physicians and families as to what may be expected under this procedure as well as its limitations. It is a special plan for an underprivileged group of farm people. The program for medical care of the Farm Security Administration would have to have considerable modifications and changes if transferred to any other segment of the population."

The position of the committee in the matter was sustained.

President Roosevelt's plan of hospital construction likewise received some very pertinent consideration. First, the above mentioned Legislative Committee, referring to this plan, and the several bills which have been introduced in Congress pertaining thereto, with special reference to the so-called Wagner-George bill, as re-drawn, called attention to several points with which the medical profession does not agree, and to which it should give its attention: 1. Definition of the term hospital in the bill should be modified to exclude health, diagnostic and treatment centers. 2. All projects to be constructed under the bill should be subject to the approval of the contemplated National Advisory Hospital Council. 3. Reference to osteopathic representation on the proposed council should be eliminated. 4. The method of selecting members of the proposed council should be given further consideration."

Our then President-Elect Dr. Van Etten, who had made more or less the same criticism, incidentally, illustrated the situation most admirably by the following well told story: "When Herman Biggs was health commissioner of the state of New York he proposed building cottage hospitals and laboratories in order to solve the rural problem. At a hearing before Governor Smith, everybody seemed to favor the project. Finally the Governor said he would like to hear what some country doctor thought about it and a doctor from Malone, away up in the Adirondacks, rose and said, 'In the summer time the Adirondacks are full of city people and there are plenty of city doctors to take care of them, but in the winter very few people are there and the country doctors and the small towns have plenty of facilities to care for them. All we ask you to do, Governor, is to keep the roads open.' The cottage hospitals were not built. Good roads in the state of New York solved the rural problem. There is now a physician within thirty minutes of every person in the state."

One reference committee considering the plan insisted that whatever else is done about it, local need,

locally determined, must be considered basic. Another reference committee reported itself in harmony with the plan of President Roosevelt for the erection of numerous small hospitals with federal funds, provided actual need is shown locally; local government units can demonstrate their ability and willingness to maintain the institutions when built; that a distinction be made between provisions for hospital beds and provisions for medical care; that all appropriations through the operation of the plan be approved by the proposed National Hospital Advisory Council, and not merely those of the first year; that provisions made for representation of the osteopathic profession be eliminated from the plan, and that members of the Advisory Council be appointed by the President, and not by the Surgeon General of the United States Public Health Service. The recommendations were all approved by the House of Delegates.

Our committee appointed to confer and consult with federal representatives reported that they had gained the impression from statements of President Roosevelt that the money involved in putting into operation the National Health Program would, temporarily at least, inhibit further legislation along that line in the present Congress.

In view of the recently increased activities in graduate medical instruction, it may be of interest to know that the Council on Medical Education and Hospitals has set up a very complete, yet concise set of principles covering the essentials of a graduate medical school. They were approved.

The Council on Medical Education and Hospitals, it will be recalled, received much and considerably confused attention last year. The By-Laws pertaining thereto were amended again this time, apparently to the satisfaction of all concerned. The membership will be seven. Hereafter, one membership will terminate each year, and a successor will be nominated to the House of Delegates by the Board of Trustees.

A new Scientific Section was set up, the Section on Anesthesiology.

An effort made to combine the existing sections on Pathology and Physiology, and Pharmacology and Therapeutics, into a Section on Experimental Medicine, failed, even in the face of a desire to consolidate the scientific work of the Association into a smaller number of sections, largely because of opposition on the part of the Section on Pathology and Physiology.

In this connection, it is significant that the Judicial Council was directed to study the advisability of an amendment to the By-Laws of the Association, providing that no scientific section shall be represented in the House of Delegates which has an average membership of less than 200—which really means registration at the annual session.

This was the year for the re-apportionment of Delegates. It is made every three years. There cannot be more than 175 delegates. Each scientific section is represented by one delegate, the United States Army, Navy and Public Health Service, by a delegate each, and the remainder are apportioned among state associations in accordance with membership. The total membership of the Association is 116,266. The apportionment was made on the basis of one delegate for each 930 members or fraction thereof. The State Medical Association of Texas having 4,422 members, lost a delegate. It has heretofore had six delegates. It will now have only five. In the re-apportionment, California, Minnesota, New Jersey and North Carolina each gained a delegate, while Massachusetts, Tennessee, Texas and Virginia each lost a delegate.

The name of the Council on Foods was changed to that of "Council on Foods and Nutrition," in view of the increasing importance of the element of nutrition and the increasing governmental control of other matters with which the Council mainly concerned itself in the beginning. In the beginning it was very largely a matter of accuracy in labeling and truthfulness in advertising foods. The federal laws have rendered much of this function needless; hence the Council can hereafter give its principal attention to the nutritive value, vitamin and mineral content and dietary essentials of foods.

A resolution from California called for a committee to study the problem of aid to needy physicians, and the possible establishment of a national home for their care. The reference committee turned thumbs down on the resolution, on the ground that a study of the scope and character the resolution suggested would be both expensive and time-consuming, and that the adoption of the resolution would establish a basis of national responsibility for the indigent physician, whereas the responsibility is entirely local.

A resolution from Mississippi cited the fact that Senator Bilbo of that state, had introduced in the Senate of the United States, a resolution declaring June 22 as "Doctor's Day," in recognition of the services rendered by the medical profession to the people. Approval of the idea was sought. The House of Delegates expressed its appreciation of the honor thus sought to be done the medical profession, but was rather fearful that there would be implications and complications of such nature as to make adoption of such an idea ultimately most embarrassing.

The Constitution of the Association was changed so as to require that a member hold the title "Doctor of Medicine" or "Bachelor of Medicine."

The House decided to forego its previously expressed purpose of re-arranging and re-wording the Principles of Medical Ethics, which it did upon the recommendation of the Judicial Council.

At the same time, the Principles of Ethics were so amended as to strengthen and to some extent clarify the section referring to patents. Section 5, Article I, Chapter III, was changed to read as follows: "Sec. 5.—It is unprofessional to receive remuneration from patents or copyrights on surgical instruments, appliances, medicines, foods, methods or procedures. It is equally unprofessional by ownership or control of patents or copyrights either to retard or to inhibit research or to restrict the benefit to patients or to the public to be derived therefrom. It is unprofessional to accept rebates on prescriptions or appliances, or perquisites from attendants who aid in the care of patients."

Uniformity in membership as between the several component state associations, has received the attention of the Secretary of the Association, and of the Judicial Council now for several years. It is recognized that the membership situation in the national body is complicated at best. It should be simplified to the extent possible. The Judicial Council pointed to the fact that there are at least eight distinct types of membership among the constituent state associations, such as "regular, active, associate, affiliate, honorary, retired, intern and non-resident." These various classes are covered by various requirements, so that qualification is not uniform. The American Medical Association cannot govern in such matters except by agreement and common consent. The presence in the organization of many physicians who are not sufficiently interested in the practice of medicine to secure license to practice, has also attracted the attention of the Judicial Council. It is strongly recommended that something be done about it. In Texas, there are four classes of membership, "active, honorary, emeritus and intern." In each class the qualifications for membership set up by the

American Medical Association are required. It occurs to us, in passing, that it does not matter to anybody how many classifications there are, so long as the basic qualifications of the American Medical Association obtain. That would certainly avoid the confusion, of which there is now so much complaint.

According to the reports of the Secretary and of the Board of Trustees, the American Medical Association is progressing apace. There can be no complaint about either the membership status or the financial status, in spite of the very depressing and up-set state of affairs generally throughout the country.

Membership, which is, as a matter of actual fact, merely the membership of county medical societies, has increased by more than 3,171. There are now 115,381 members in good standing. Forty-six constituent associations have gained in membership, while there has been a loss in seven. These losses have been nominal, however, the smallest being one, and the largest thirty-five.

In the matter of Fellowship, there has also been a gain. It will be borne in mind that each member of a county medical society is *per se* a member of the American Medical Association. They pay no dues to the national organization. Under the circumstances, and in order to raise money by means of payment of dues, another sort of "membership," which is called "Fellowship," has been set up. Fellowship is, technically, in the "Scientific Assembly" of the Association. Fellows must be members. Each Fellow pays dues in the sum of $8.00, for which he receives *The Journal of the American Medical Association*, or its equivalent in other publications of the Association. The annual sessions of the American Medical Association are actually two-fold, one of the House of Delegates, which represents membership, and representation in which is based on membership, the other the Scientific Assembly, made up of Fellows, which Fellows are also members. As we have said, there has been an increase in Fellowship during the year. Indeed, there has been a constant increase in Fellowship now for a number of years. The total Fellowship at the time annual reports were made up was 71,168. This is an increase of 1,700 over the previous year.

According to the report of the Secretary, there are 6,795 practicing physicians in the State of Texas. Of these, 4,422 are members of the State Medical Association of Texas, and 2,224 are Fellows of the American Medical Association. We rank sixth in the number of practicing physicians, seventh in the number of members, and ninth in the number of Fellows. It is not fair to judge our percentage of either membership or Fellowship on the total number of practicing physicians in the State, because of the large number of these who are not eligible for membership in our organization. However, it is rather strange, considering the progressive nature of our State Association and of the medical profession of the State generally, that we should fall so far back in percentage of Fellowship. Last year we ranked seventh in the number of practicing physicians in the State, and eighth in the number of Fellows.

Financially, we have held the line nicely, despite any number of very adverse conditions which have confronted the Trustees in the management of the Association. For instance, fees for legal service and investigations, and losses from publications, amounted to the rather large sum of $205,885.02, to be exact. This out of a gross income of $1,798,-766.82. The principal item of litigation costs was the federal prosecution of the Association upon the charge of violation of the Sherman anti-trust law, about which matter we presume our readers are already fully informed. The net gain for the year was $114,798.77, of which sum $84,938 represented interest on investments.

The special journals cost the Association $29,125.49, over and above the income from these publications. However, each of the eight special journals published showed an increase in circulation during the year. *Hygeia* has been improved, and an increase of 7,588 in circulation was reported. The net loss on the publication of *Hygeia* was $7,699.-84. The *Quarterly Cumulative Index Medicus* showed an increase in circulation during the year. This, of course, is a publication which must always have a relatively small circulation. Chances are that it will always lose money. However, it is figured that the good accomplished will justify any reasonable loss. Last year the loss on this publication was $39,151.66, as contrasted with a loss of $43,034.71 the year before.

The Trustees' report is replete with valuable and interesting data. We cannot undertake to discuss it here in any reasonable detail. We earnestly suggest that it be read. As our distinguished retiring President, Dr. Rock Sleyster, said, "535 North Dearborn Street, Chicago, Illinois, is not the American Medical Association. It is a building. We are the American Medical Association." However, those at the above address have rendered an account of their stewardship, and it is up to us to receive it.

NEW CONCEPTS OF THE ETIOLOGY OF HEMOLYTIC ANEMIA AND THEIR RELATION TO DIAGNOSIS*

W. D. TIGERTT, M. D.
AND
JOSEPH M. HILL, M. D.
DALLAS, TEXAS

The mention of hemolytic anemia of the familial type immediately brings to mind "fragile" spherical red cells. This type of erythrocyte is usually thought to occur only in this disturbance, and to be necessary for the diagnosis of the disease.

It is the purpose of this paper to point out that this change is not confined to familial hemolytic anemia alone, and that greatly increased red cell destruction can occur in the absence of this finding. It should be remembered that increased fragility refers only to the resistance of the erythrocytes to hypotonic saline, and as Isaacs[6] so pointedly emphasizes, no one has yet shown the presence of hypotonic saline in the body.

It is not our intention to minimize this diagnostic point, and the associated changes in cell dimensions, which when present are of the utmost significance, but to point out that these are merely manifestations of the pathologic mechanism of cell destruction.

The hematologic findings usually considered to be indicative of and necessary for the diagnosis of hemolytic anemia (familial) are (1) microcytosis, (2) increased diameter-thickness ratio of spherocytosis, and (3) decreased resistance to hypotonic saline hemolysis. In typical cases presenting this triad careful study shows that erythrocyte dimensions and level of anemia exhibit definite fluctuations. Of the atypical cases presented by Hill[5] in 1938, five, at some time during their period of observation, showed the above three supposedly characteristic erythrocyte features, usually after clinical cure by splenectomy. The fact that these supposedly characteristic erythrocytes were not constantly present, plus the successful experimental reproduction of the hemolytic syndrome in dogs, by administration of suitable hemolysin, suggests strongly that the sometimes spherical cells of this disease are not produced as such by the bone marrow but are secondary to the hemolytic process. We must recognize then that cell shape is dependent on several, and occasionally opposing factors; a fact which facilitates the understanding of the so-called atypical cases whose cells are not constantly spherical.

The necessity of recognizing these atypical cases and appreciating the underlying mechanisms, is self-evident, since contrary to the statements of Thompson[9] and Haden,[3] the cases forming the basis of this report did respond favorably to splenectomy. Certain of the cases reported by Hill will be utilized for clinical material and explanations of their variable features, partially based on animal experimentation, will be offered. Only cases conforming to the following rigid criteria will be utilized.

1. A definite family history or family relationship as demonstrated by repeated measurements on relatives.

2. The finding of an increased volume-thickness ratio at one time or the other during the period of observation.

3. Clinical cure or typical response following splenectomy, if performed.

The first of the variables noted in these cases is the degree of "spherocytosis," which when present is definitely not a fixed quantity, but sometimes fluctuates in a manner apparently unrelated to the severity of the process. In other instances it becomes much more marked prior to, or during, the crises which form a definite part of this disease.

Secondly, certain of these individuals exhibit other co-incident processes of progressive severity such as cirrhosis or deficiency of the anti-anemic factors, which when present alone tend to produce characteristic erythrocytes of a shape diametrically opposite to that of the spherocyte.

It then becomes apparent that if one assumes a dynamic relation of the various forces acting on the erythrocyte, that an explanation of both typical and atypical cells is possible. Thus when the factors inducing spherocytosis act on normal cells the typical spherocyte is produced, the degree varying with the concentration of the etiologic agent and with its ability to combine with the erythrocyte, plus the location of the actual focus of destruction. On the other hand, when maturation defects are present, tending to produce a flat cell, the resultant cell shape is the algebraic sum of these factors, plus those tending to induce spherocytosis. It would then be possible to produce a cell actually flatter than normal, but which was still associated with an active hemolytic process, since there is not necessarily a correlation between the degree of spherocytosis and the activity of the hemolytic process.

Finally, as will be elaborated more fully, there are experimental findings which indicate that young cells are more resistant to

*From the Department of Pathology, Baylor University College of Medicine, Dallas, Texas.
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the factors inciting spherocytosis than are the mature forms. Attention should be called to the work of Dameshek,[1] who found that the diameter of the reticulocytes and more immature cells, both in the blood stream and bone marrow of individuals with hemolytic anemia, were of normal dimensions. Our findings, both clinical and experimental, are in complete accord with this conclusion.

Experimental Production of the Hemolytic Syndome.—The injection of a species-specific hemolysin, prepared in the usual manner, into the donor animal results in the production of cells closely simulating those of typical hemolytic anemia. This is followed by the development of anemia, the severity of which varies with the amount of hemolysin given.

If death does not result, there will be noted a definite response of polychromatophilic cells and reticulocytes, blast forms appearing if the demand is severe. These cells are of normal or increased diameter and volume, varying directly with the level of the anemia and with the immaturity of the new cells. In vitro titration shows that a much greater concentration of hemolysin is necessary for the complete destruction of these young response cells, and they also exhibit a normal or increased resistance to hypotonic saline hemolysis.

These changes have been reported in full by Dameshek and Schwartz[1] and by Tigertt and Duncan.[10]

Following repeated doses of hemolysin the animals develop a type of immunity, probably dependent on the foreign protein present, so that the production of a chronic hemolytic anemia by this method has not yet been accomplished. However, the production of an acute hemolytic process in animals whose cells had been previously altered as to diameter or fragility has resulted in changes which reproduce certain of the findings seen in atypical human cases. These findings will be offered below in an attempt to explain the absence of certain features in human cases, heretofore usually considered necessary for the diagnosis of hemolytic anemia of the familial type.

Hematologic determinations, both clinical and experimental, were made with all available precautions to insure accuracy. For details, reference may be made to the previous publications.[5, 10]

Each of the three "typical" features of the cells of hemolytic anemia (familial) will be discussed separately and illustrated by cases in which they were absent.

MICROCYTOSIS

The association of microcytosis and certain cases of hemolytic anemia was first made by the Belgians Vanlair and Masius[11] in 1871. These authors also realized that the cells were thicker than normal, so that the term applies only to the diameter. Experimentally, this is the change produced by hemolysin acting on normal cells.

Clinically, cases are seen in which the cell diameter is actually greater than normal. This is illustrated by the case of K. M., a white male, age 7. A family history of jaundice was established. Pertinent data are presented in table 1.

TABLE 1.—*Hematologic Data.*

	RBC*	MCV*	MCD*	MCT*	VTI*
Case 1	1.5	186	8.0	3.8	1.7
			Splenectomy		
	4.0	90	6.4	2.8	1.7
Dog 42	6.7	70	7.0	1.8	(Normals)
		Six days after phenylhydrazine			
	1.7	128	8.1	2.4	(Response cells)
		4 cc. of hemolysin given. Six hours later.			
	1.0	131	7.7	2.8	(Cells more fragile)

*In this table, and in the following tables, RBC represents the red count in millions; MCV represents the mean corpuscular volume in cu. microns; MCD represents the diameter in microns; MCT represents the corpuscular thickness in microns, and VTI represents the ratio of the volume to the thickness (Normal = 0.98 to 1.5).

It will be noted that on admission both the diameter and the mean corpuscular volume were above normal, with a volume-thickness index of 1.73, which is distinctly above our upper limit of normal (1.5) as determined by unpublished observations. Splenectomy was followed by a clinical cure, and, associated with the rising red count, the typical microcyte, still with spherical tendencies, developed.

Experimentally, in attempting to reproduce the type of cell described in this case, it was deemed advisable to determine the effect of hemolysin on large cells. Due to the previously described immunity developed to rabbit serum, this could not be done by repeated injections of hemolysin. However, the same macrocytic response can be induced by phenylhydrazine. Dogs were given 2.5 cc. of a 2 per cent solution of phenylhydrazine per kilogram of body weight and when the period of destruction ceased, as indicated by a rising count, hemolysin was administered intravenously. The resultant cells, as shown in table 1, were larger than normal but exhibited spherical tendencies (decreased diameter with increased thickness) and an increased fragility.

These findings support the view that the cells of K. M. can be explained on the basis of the agent producing spherocytosis acting on cells on increased diameter and volume, probably due to megaloblastic transformation related to excessive demand, as suggested by Davidson and Fullerton.[2]

SPHEROCYTOSIS

As an introductory statement to a discussion of spherocytosis it should be emphasized that this change is not confined to hemolytic anemia of the familial type. The administration of phenylhydrazine to animals results in the production of this same type of cells, as the anemia develops. Similar pictures are reported with other hemolytic drugs.

Two clinical cases have been seen, in which a family relationship was established, and in which clinical cures were obtained by splenectomy, but the patients did not exhibit significant spherocytosis on admission. A very interesting finding in these two cases was the development of definitely spherical cells when measured forty to sixty days after splenectomy. These changes are summarized in table 2, in which it will be noted that the development of these cells was associated with a rising red count. Certain fragmentary and as yet uncompleted experimental findings afford a theoretical explanation of this apparent paradox.

TABLE 2.—*Hematologic data*

	RBC	MCV	MCD	MCT	VTI
Case 2	3.5	59	6.2	1.9	1.3
			Splenectomy		
	4.5	92	6.4	2.7	1.7
Case 3	.75	110	7.2	2.7	1.49
			Splenectomy		
	4.5	121	7.12	3.0	1.7

First, as has been shown in a previous publication,[10] when large doses of hemolysin are administered, marked spherocytosis followed by cell destruction results. On the other hand, if smaller doses are given, some of the cells exhibiting a definite tendency to spherocytosis persist in the blood stream for a period fully as long as that reported for the life period of normal dog erythrocytes. Clinically, we are all familiar with the fact that occasionally definite spherical cells are seen in apparently well individuals, and we have seen one instance of spherocytosis associated with a count of 5,300,000. These findings would indicate that the degree of spherocytosis is not always correlated with the severity of the hemolytic process.

There are apparently two definite methods of blood destruction in hemolysin induced anemia. One of these is undoubtedly intravascular hemolysis and the second is probably destruction by the spleen of these previously altered cells, since examination of the spleen shows the reticulo-endothelial cells to be loaded with erythrocytes. An attractive assumption, based on the work of McNee[8] and of Knisley,[7] is that the circulation through the spleen is sufficiently slow so that the final stages, or all of the stages of intravascular hemolysis could occur in its sinuses, followed by the phagocytosis of either the altered complete erythrocyte or its products.

Following the same line of thought, the development of spherocytosis in these individuals after splenectomy was probably due in part to the absence of the organ responsible for the removal of the altered cells from the blood stream, with the result that the cells circulated for a longer period of time and thus became more spherical prior to their final destruction.

FRAGILITY

The abnormal erythrocyte fragility in this disease is apparently dependent on the increased diameter-thickness ratio or sphericity. It then follows that the majority of the material presented above applies to this change. Again, though, we wish to reiterate that these changes are not confined to hemolytic anemia of the familial type alone; and that at certain phases of complicated hemolytic anemia the cells may be actually more resistant to saline hemolysis than normal. This is particularly true when the preceding hemolysis has been marked and young cells form the bulk of the circulating erythrocytes. The same picture is seen when complicating factors such as cirrhosis are present.

This is illustrated by the case of B. M. W., a white male, age 19, who on admission showed a definitely spherical microcyte, with a volume-thickness index of 1.64 (Table 3). Operation was refused and he later developed a cirrhosis with the result that the circulating erythrocytes when measured at this time showed a VTI of 0.97, although destruction of red cells continued.

TABLE 3.—*Hematologic date*

	RBC	MCV	MCD	MCT	VTI
Case 4	2.6	71	6.0	2.5	1.64
			Second admission		
	1.5	90	7.8	1.8	0.97

DISCUSSION

Finally the question arises, as usual, what is the cause of hemolytic anemia of this type, and, if some type of hemolysin is the cause, why can this not be demonstrated? Hemolysin administered in known large amounts to animals cannot be demonstrated in the plasma by the usual methods of titration, because of its fixation to the red cells. If comparison with in vitro activity is expected, demonstration of the hemolysin in the serum would not be possible, unless it was present in very large quantity or unless some factor prevented its adsorption to the erythrocyte.

Attempts to demonstrate the hemolysin in combination with the circulating erythrocytes have been partially successful. Within several hours after administration of hemoly-

sin, the red cells become definitely more susceptible to hemolysis by hypotonic saline. If these same cells are used in the common dilution method of amboceptor titration, they will be hemolyzed in a higher dilution of hemolysin than were the normal cells of the same animal. These findings are in accord with the work of Ham and Dingle,[4] these investigators finding that cell destruction in this disease was accomplished only when complement was present, that the patient's cells showed increased susceptibility to hemolysis in immunological hemolytic systems, and who were unable to demonstrate any lytic substance in the plasma.

Investigation regarding the method of action of the hemolysin on the cell is not yet complete. Probably some type of change in cell lypoid is produced by direct combination. The erythrocytes that are so altered resemble the cells of hemolytic anemia, both in typical and atypical cases, so that even if the underlying mechanism is different in clinical cases, the eventual result is the production of much the same type of erythrocyte.

CONCLUSIONS

1. Typical cases of hemolytic anemia of the familial type exhibit microcytosis, spherocytosis, and increased fragility.

2. These changes are not confined to this type of hemolytic anemia.

3. At certain phases of the disease, one or all of these findings may be absent, particularly if complicating factors are present.

4. Possible explanations of the underlying mechanism of the cell changes in hemolytic anemia, with particular reference to atypical cases, are offered, as afforded by experimental findings.

5. There is not always correlation between the degree of spherocytosis in the peripheral blood stream and the amount of red cell destruction.

6. Certain immunological aspects have been discussed.

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720 College Avenue.

ABSTRACT OF DISCUSSION

Dr. Roy R. Kracke, Atlanta, Ga.: The observations reported in this paper appear to be very valuable. Since Drs. Hill and Tigertt are leaders in research activities of this type, there is very little I can add to the work that they have presented.

I have long been interested in this problem, since Dameshek made his first report about the mechanism of hemolysis in hemolytic icterus, and since reading the publications of Dr. Hill, my interest has been renewed in this problem.

It is somewhat disturbing to realize that cases of hemolytic icterus may exist without the presence of one or more of the classical diagnostic signs, and that the conventional features of spherocytosis, microcytosis and increased fragility may be absent in some cases and quite variable in others. As a matter of fact, Naegeli has stated that hemolytic jaundice is a disease of many and variable characteristics and that the disease may occur and not show any one or any two of these diagnostic points at different times.

We have always stated, without much support for the belief, that familial hemolytic jaundice is an inherited disease, in which the patient inherits an inherent abnormality of his red cells, whereby the cells produced in the bone marrow are defective in that they are spherocytic in shape. Undoubtedly it is inherited, as a careful study of many families clearly shows. But as Dameshek has indicated and as Hill points out, it is not the inheritance of the spherocytic cell but rather the inheritance of an unusual type of hemolysin which circulates in the blood, and which is responsible for the sphericity of the cell.

I have seen patients with hemolytic icterus that at one time showed spherocytosis, and at other times did not show it. After all, when one considers the hemolytic agents that might cause a cell to swell up and become thicker than normal, hypotonic saline solution is only one of many agents that are capable of doing this.

I have recently studied a woman who had typical hemolytic icterus, and who showed the most astounding degree of auto-agglutination of her own red blood cells as well as cells of all types. She was a very difficult clinical problem since we had to go through splenectomy knowing that we could not resort to blood transfusions. An interesting feature of her case was the fact that she constantly presented from ten to eleven grams of protein in her blood with reversal of the albumen-globulin ratio. We felt that this was responsible for the auto-agglutination of her blood cells. This marked globulin increase made us wonder whether or not the spleen was concerned in its production for after its removal there was a marked decrease of total globulin as well as a marked decrease in the tendency of the red blood cells to become agglutinated and therefore hemolyzed.

If it is true that patients with hemolytic icterus have inherited hemolysins in their blood stream, just as there are inherited blood sub-groups, then what is the role of the spleen in this? After the spleen is removed, we know that these patients are cured, practically speaking. It seems then, instead of our old idea of the spleen being the graveyard for these fragile spherocytic cells, it has something to do with the production of this atypical hemolysin. When we remove the spleen we remove the seat of antibody formation which produces sphericity and at the same

time remove the organ that destroys the atypical spherocytic cells.

All these are interesting points of speculation which were brought to my mind as Dr. Tigertt read his paper. I would like to hear Dr. Hill talk about it some more.

Dr. J. M. Hill, Dallas: The point about our diagnostic criterion is very well taken. Of course, if we could detect the hemolysin in the blood serum or plasma, that would constitute a specific test, and we are directing our efforts at present to accomplish this. Evidently there is considerable difficulty in trying to separate the hemolysin from the red cells, to which they are adsorbed or united. However, this may become possible. Until then we must act on a little less specific information, and we do the obvious thing and determine the state of balance between red cell destruction and production in the individual. If destruction is accelerated and production increased in attempted compensation we then look for the cause, and in the absence of other obvious findings we are inclined to believe it is this type of anemia.

THE PLACE OF VITAMIN K IN HEMORRHAGIC DISEASES*

ALVIS E. GREER, M. D., F. A. C. P.
HOUSTON, TEXAS

Historical.—While working on the sterol metabolism of the chick, Henrik Dam[11] reported in 1929 and 1930 that certain deficiency diets produced a disease resembling scurvy. Spontaneous hemorrhages occurred in the affected animals with associated prolonged clotting time and markedly diminished plasma prothrombin. In 1930 Horvath[24] also observed that the coagulation of blood of chickens was accelerated by diets of sprouted soy beans, and the same hemorrhagic state was described by McFarlane and associates[29] in 1931 when they were studying the fat-soluble vitamins in chickens. In a letter to the editor of *Nature,*[12] Dam directed attention to his earlier articles[13, 17] in which he described a new deficiency disease in chicks, characterized by a tendency to hemorrhages. He stated this condition was due to the lack of a specific antihemorrhagic factor which is different from vitamin C because the addition of lemon juice or ascorbic acid was without the slightest effect. Further work has demonstrated this factor to be a fat-soluble vitamin occurring in hog liver fat, hemp seed and certain vegetables, tomatoes and kale, and in lesser amount in many cereals as well as egg yolk in small quantities, in rye and rice which are unhulled, and certain flowers as sunflowers and alfalfa. However, it is not contained in cod-liver oil. It was found that the antihemorrhagic vitamin was not identical with A and D because large quantities of these vitamins in the form of concentrates of fish liver oils are ineffective. Commercial carotine or 4 to 10 per cent of fresh wheat-germ oil do not prevent the disease. However, large quantities of wheat-germ oil (24 per cent) give some protection, whereas 3 to 4 per cent of hog liver fat will entirely relieve the symptoms of deficiency. It resembles vitamin E in some respects, but since hog liver fat is considerably more active than wheat-germ oil, it is unlikely that the antihemorrhagic vitamin is identical with vitamin E. Dam, therefore, suggested the term vitamin K, derived from "Koagulation," for the antihemorrhagic factor.

Almquist and Stakstad[3] reported in 1931 on a study of the coagulation of blood in the so-called "sweet clover disease" of cattle. The occurrence of internal hemorrhages, as well as excessive bleeding from wounds, had been observed several years previously in cattle which ate hay or silage from sweet clover of poor quality or where the clover was spoiled or moldy. However, properly cured sweet clover was without deleterious effects. As the result of their study of the blood, it was found that fibrinogen was not the factor, and that it was not due to any changes or constituents in the antithrombin, antiprothrombin, calcium or platelet content of the blood. It seemed definitely to be due to a quantitative lowering of the blood prothrombin.

Source.—The most practical and potent source of vitamin K is alfalfa.[7] Its mass production from putrefied fish meal is impossible because of the uncontrollable factor in the putrefying process, and it does not remain potent when mixed with bile. Next to alfalfa, the best sources of vitamin K are hog-liver oil, cabbage, spinach and tomatoes. Almquist[1] presented an efficient method for the extraction of vitamin K from alfalfa by the use of hexane solvent as a continuous process, with the addition of activated magnesium oxide for the removal of green pigments.

CHEMICAL QUALITIES

Almquist found the vitamin to have the following qualities: it is highly soluble in polar and non-polar organic solvents but not in water or 50 per cent alcohol-water solution; it is relatively stable to heat and light; irradiation in a sealed tube for twenty-four hours with a 500 watt electric lamp at a distance of three to four inches does not destroy its potency; it is alkali-labial. It has no sulfur nor phosphorus but a small amount of nitrogen. Color tests indicate an indol nucleus. In its method of extraction and preparation, in its lipoid-solubility and thermostability, it resembles vitamin E. Klose, Almquist and Mecchi[27] have shown vitamin K to be a complex unsaturated hydrocarbon. McKee and associates[30] have reported the ex-

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traction of two pure crystalline substances possessing vitamin K activity, from alfalfa and putrefied fish meal respectively; vitamin K_1 from the former, and vitamin K_2 from the latter substance. They stated the potency of vitamin K_1 is approximately 1,000 units per milligram; the potency of vitamin K_2 being only 660 units.[40] As further evidence they had isolated vitamin K_1 and K_2 and that the two vitamins contained the suggested quinone structure they announced the preparation of the diacetates of dihydro vitamin K_1 and dihydro vitamin K_2, which they claimed to have the activity of vitamin K.[5]

SYNTHETIC VITAMIN K

Almquist and Klose[2] reported in 1939 the discovery of the antihemorrhagic activity of pure synthetic phthiocol, 2-methyl-3-hydroxyl-1, 4-napthoquinone. The chemical and physical properties of this compound were similar to those of vitamin K. They believe phthiocol is the simplest member of an homologous series of antihemorrhagic substances. It was pointed out by Doisy[19] that they are of great therapeutic importance because they are soluble in water and can be used for parenteral therapy, whereas the natural vitamin cannot be administered intravenously because of its oily character.

DISTRIBUTION IN THE BODY

Vitamin K is present in normal human feces in considerable amounts, and to some extent in the liver, but not in human bile. It is present in acholic stools, being obtained from ingested food and the putrefactive action of the intestinal bacterial flora on food. Certain bacteria, especially the Bacillus coli communis, Bacillus subtilis, Bacillus tuberculosis and Staphylococcus aureus contain vitamin K in large quantities.

If bile is present in the intestines it serves as a carrier of the vitamin across the intestinal mucous membrane, and the prothrombin time is directly affected. Just how this is done is not known, but apparently the liver is directly concerned with the manufacture of vitamin K. The normal absorption of the fat-soluble vitamin depends upon the condition of the intestinal tract; in cases of long continued nutritional deficiency or with blood in the intestines, the absorption of vitamin K is reduced. Vitamin K is absorbed by the jejunum and not by the stomach or colon. Human subjects on a vitamin K-free diet for about a week still have a large quantity in the lipoid fraction of the feces. It has been demonstrated in certain animals that can apparently dispense with vitamin K in their ingested food, that they probably get it from bacterial processes in the intestines.[15] Any destructive changes in the liver prevents the formation of the vitamin. Engel[21] found the amount of prothrombin to be reduced in all cases of hepatocellular affections, in cirrhosis and icterogen hepatitis, and that phosphorus, tetrachloride and chloroform have a reducing effect on prothrombin. It has been shown[10] that after ethereal intoxication in dogs, the quantity of prothrombin in the blood is reduced to less than 30 per cent for twenty-four hours.

It appears that the normal human body obtains vitamin K either directly from ingested food or by the putrefactive action of the intestinal flora on this food. The vitamin K is, with the aid of the bile, absorbed by the intestine and has some effect on the prothrombin content of the blood or on the activity of the prothrombin in the phenomenon of blood clotting.

BLOOD CLOTTING

There is considerable confusion regarding the theories of the coagulation of blood. Howell promulgated a theory in 1912 in which he suggested that prothrombin is prevented from being active by the presence of an antithrombin, heparin. When bleeding occurs the blood platelets are ruptured, liberating a thromboplastin, cephalin, which releases the prothrombin-antiprothrombin complex, allowing prothrombin to combine with calcium to form thrombin. Howell believed there was present an antithrombin in the blood to hold in check the small amounts of thrombin formed by the breaking up of platelets in vivo. When an excess of thrombin is found it acts on the fibrinogen to form fibrin. According to the theory of Marawitz, he believed that calcium and thromboplastin together changed prothrombin to thrombin. A later theory, postulated by Mellanby[31] and also by Quick[32] in 1936, has shown that heparin is an antithrombin and not an antiprothrombin. Eagle[20] demonstrated in 1937 that trypsin freed from calcium as well as calcium-free snake venom can coagulate blood. He was of the opinion these two agents were the equivalent of thromboplastin (platelet derivative) and calcium, which together constituted a proteolytic enzyme converting prothrombin into thrombin.

The retarding in the period of coagulation depends entirely on the quantity of prothrombin contained in the blood. According to Quick, the time required for coagulation fluctuates between eighteen and twenty seconds. The period is retarded in direct proportion to the deficiency of prothrombin in the blood. A healthy adult has 50 per cent prothrombin, whereas a newborn child has one-fourth as much. Quick[35] found the prothrombin level in infants a few days after birth was essentially the same as in adults,

although it was found the prothrombin in infant's blood diminished more rapidly than that of normal adults. If the content of prothrombin is reduced to less than 10 or 20 per cent of the normal, a most decided tendency to hemorrhages is produced in men and animals.

EXPERIMENTAL OBSERVATIONS

Dam and his colleagues[18] have studied the effects of K avitaminosis in infants as a cause of the hemorrhagic diathesis. In normal infants during the first days after birth a moderate K avitaminosis usually is present, which, however, as a rule disappears within a week. It has been suggested that the suckling infant has harmless bacteria introduced into the intestines through the milk, and vitamin K is so formed. The triad, icterus gravis neonatorum, anemia neonatorum, and hydrops neonatorum, are considered by most writers to be closely related. This relationship is shown by clinical and hematological similarities, and also by the fact that it has been repeatedly observed that a woman who has a child with icterus gravis is likely later to have one with hydrops or anemia neonatorum. In their investigation it was found by Dam and his co-workers that such patients had one symptom in common, *i. e.*, a reduced prothrombin content of the blood. It is likely that the prothrombin deficiency in these infants, also, is due to a K avitaminosis.

Dam and Glavind[16] in a study of the clotting power of human and mammalian blood in relation to vitamin K found that in essential thrombopenia and aplastic anemia with a reduction in the platelet count, there was no change in the clotting time. They reported that the plasma from K avitaminosis chicks or plasma from which prothrombin was removed by absorption, resembles the plasma from patients with obstructive jaundice. Obstructive jaundice was produced in normally fed chickens by choledochus ligature, followed by a rapid increase in the clotting time within twenty-four days. One single intracardial injection of vitamin K concentrate restored the clotting power to normal. The prothrombin must be reduced to less than 10 per cent of the normal value before the clotting time begins to increase rapidly. Dan, furthermore, stated that the reduction of prothrombin in obstructive jaundice plasma is of the same order as in chicken plasma of the same clotting time, and that the bleeding tendency in bile fistula rats may be counteracted by food rich in vitamin K. It was found that vitamin K and other fat-soluble concentrates, are insufficiently absorbed from the intestines when bile is absent, leading to coagulation deficiency.

According to Rhoades[36] the absence of bile salts may occur without obstruction to the common bile duct, for it has been repeatedly shown that these salts may not occur in the bile until many days after the obstruction has been relieved. Since K avitaminosis in such cases is produced by the absence of bile salts in the intestinal tract, this statement of Rhoades strongly supports the necessity for repeated postoperative prothrombin determinations.

Greaves,[23] experimenting on bile fistula rats, states that vitamin K concentrates administered intraperitoneally and subcutaneously were equally as active as when given orally. He found no difference whether beef bile, sheep bile, boiled bile, crystalline bile salts or bile boiled with alkali were given with either the hexane extract of alfalfa or vitamin K concentrates.

PROTHROMBIN DETERMINATION

The method of Quick[33] for the estimation of blood prothrombin is simple and quite accurate. Plasma is obtained from oxalated blood. The plasma is mixed with an emulsion of dried rabbit brain to supply an excess of thromboplastin. Calcium chloride is then added. The number of seconds it takes to form a clot in a 37.5° C. water bath is recorded as the prothrombin time. Normal values are about twenty seconds and bleeding is not observed in the presence of jaundice unless the clotting time is over forty seconds.

CLINICAL STATES AFFECTED BY K AVITAMINOSIS

The clinical states of vitamin K deficiency as outlined by Cantaraw[8] are: insufficient supply of the vitamin; inadequate absorption of vitamin from the intestines; deficient metabolism of vitamins in the formation of prothrombin; hepato-cellular damage; absence of bile salts in the intestines; short circuiting intestinal operations.

Dam[14] says it is a known fact that hemorrhagic diseases due to K avitaminosis, may develop in humans if their diets lack vitamin K. This statement is concurred in by Kark and Lozner[26] and Hult.[25] Dam refers to the treatment of sprue and "hypothrombo-anemia," a characteristic hemorrhagic disease, in connection with Herter's infantilism, causing deficient absorption of vitamin K.

Fanconi[22] has proved that the deficiency in fat-soluble vitamins, especially K, led to hemorrhages in patients suffering from sprue, as well as children with coeliac troubles. Snell and his collaborators[39] also state that in sprue as well as in gastrocolic fistula and mesenteric obstruction of lymphatic glands, a prolonged prothrombin time was observed.

Kugelmass[28] found vitamin K beneficial in pseudohemophilia hepatica of childhood, in a 7-month-old infant. Meade and Burch[6] report prompt and striking improvement over a period of five months in the treatment of hemorrhagic retinitis with vitamin K. Engel has stated that purpura fulminans is a K avitaminosis. The use of vitamin K in hemophilia, menorrhagia, metrorrhagia and essential hematuria does not affect the normal prothrombin time in these conditions.[9]

Waddell and Guerry[41] are of the opinion that the giving of vitamin K to the prospective mother, prior to labor, may be effective in preventing the prothrombin deficiency in the newborn.

THE ADMINISTRATION OF VITAMIN K

The need for treatment with vitamin K depends on the clinical detection of vitamin K deficiency by the estimation of the prothrombin time. Any patient who has a prothrombin time of above twenty seconds demands careful observation, and he may be considered a possible bleeder if his prothrombin time is above forty-five seconds. Butt, Snell and Osterberg have concluded the dosage of vitamin K is open to question, and have studied three types of patients, viz.: those with a normal prothrombin time; an elevated prothrombin time; those actively bleeding. They believed the first type needs prophylactic treatment only; the remaining two demanding active, emergency therapy. All jaundiced patients should have preoperative and postoperative prothrombin estimations. The greatest danger of hemorrhage occurs on about the third to the ninth day after operation and is evidenced by a rise in the prothrombin time.

In cases of jaundice in which surgery is contemplated 200 mg. of vitamin K alfalfa concentrate with 1 to 2 Gm. of bile salts such as desical, sodium desoxycholate, bilram and bilcan, human fistula bile, or fresh bile obtained from slaughter houses, should be given. This latter product can be frozen and kept for weeks. It may be given in amounts of 75 to 100 cc. by imbibition or mixed with pineapple juice.

In groups with an elevated prothrombin time or with active bleeding from 1 to 2 Gm. of vitamin K alfalfa concentrate with 2 to 4 Gm. of water-soluble bile are dissolved in from 250 to 500 cc. of normal saline solution, and given quite slowly by drip through a duodenal tube. One may expect this treatment to become effective in six to twelve hours. It may be repeated if desired. Butt and his associates found that intramuscular injections of from 100 to 200 mg. of vitamin K concentrate had slight effect in reducing the prothrombin time. This observation is at variance to the experiences of Dam in Copenhagen, in which his results have been excellent by the intramuscular and intravenous routes of therapy. He stated the parenteral use of vitamin K as preoperative treatment in cases of obstructive jaundice to be superior to other methods, and that in his cases the clotting power of the blood was rendered normal by three to five intramuscular injections of vitamin K.

The postoperative use of vitamin K concentrate is not as effective as in the previously outlined conditions. Immediate transfusion may cause the vitamin to become effective by temporarily elevating the amount of prothrombin. This will give the intestinal tract time in which to absorb the vitamin.

The exact dosage of vitamin K is not known but comparing the weight factors of a man to a chick, it has been found to be about 23 mg. per day for a normal man. However, 200 mg. daily has been given without toxic effect. One to two thousand (1,000-2,000) mg. of bilram (Lilly) a day, by mouth, must be given also to obtain effect.

Vitamin K is available commercially in tablet and powder forms and in 50 cc. vials. The capsule contains 1,000 Almquist units (37,500 Dam units) and each cc. in the vials contains 1,250 Almquist units. Klotogen (Abbott) and cerophyl (Cerophyl Laboratories) are on the market and are effective. The synthetic crystalline vitamin K may be given in dosage of 1 to 2 mg. by mouth daily. Andrus and Lord[4] gave intramuscular injections of 2 mg. of 2-methyl-1, 4-naphthoquinone, dissolved in corn oil. They claim it restored the plasma prothrombin level as much as 48 per cent, which was produced within eight hours after injection. The effect from one injection lasts as long as one week. No toxic effects were noted.

DISCUSSION

It has been shown[42] that vitamin K is either one of the building stones necessary for normal prothrombin production or that its presence stimulates the liver to a normal prothrombin production. The liver is essential for the maintenance of a normal prothrombin level and Smith[38] is of the opinion that a normal liver is necessary for the effective action of vitamin K. Although the prothrombin time is increased in hepatocellular affections of the liver, many other conditions may also produce prothrombin deficiency. These conditions have been outlined previously in this paper. Notable among these diseases, mention should be made of patients with obstructive jaundice or with persistent biliary fistulas in which little or no bile salts enter the intestinal tract. The fat-soluble materials in the intestines are therefore not emulsified

and absorbed. A reduction in vitamin K with a low prothrombin ensues. If large amounts of vitamin K concentrates and bile salts are given these patients, the prothrombin time will become normal within twenty-four to forty-eight hours, and the bleeding cease.

It is essential that vitamin K treatment be given as early as possible as it is of markedly lessened value when given if actual bleeding is present. In these latter cases, transfusions of fresh blood are advised to produce a temporary rise in the prothrombin level, while the bile salts are entering the intestinal tract. Rhoades and Panzer[37] claim that preserved or "banked" blood is of little if any value. This is due to the fact that the prothrombin content of "stored" blood falls rapidly. Quick[34] agrees with them and states it seems wise at the present to depend exclusively on fresh blood to control hemorrhage in the jaundiced patient.

The use of vitamin K concentrates with bile salts has been found to be of inestimable value in decreasing the hemorrhagic tendency in patients with a low prothrombin level in the blood. The use of these substances is of especial importance when the prothrombin time is increased, although it may be advisable to anticipate its possible need in other conditions, such as in pregnant women before delivery and in jaundiced patients who have a normal amount of prothrombin preoperatively. A prothrombin estimation is to be strongly recommended in all patients with jaundice in whom surgery is anticipated.

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3717 Main.

ABSTRACT OF DISCUSSION

Dr. F. J. Heck, Rochester, Minn.: This is quite outside my field and I really have nothing to add, but I think it demonstrates that one more of our bleeding problems has been drawn out of the fire, and it has been primarily through the work of the experimentalists in the field that this has been done.

One other point that I should like to make is that, as Dr. Greer has emphasized, one should have a prothrombin time determination. There are two types of prothrombin time. The Howell prothrombin time is of use in the diagnosis of hemophilia. The Quick prothrombin time is of value only in the determination of vitamin K deficiency. The laboratory man must therefore know whether the determination is to be for hemophilia or for vitamin K deficiency.

Damm has reported one group of cases in which he has experimentally produced exudates of plasma with some hemorrhages in chickens. He believes this to be due to a vitamin E deficiency. This is along different lines and so far there is nothing in the way of a laboratory procedure by which he can detect this. No cases have been described clinically which simulate these plasma exudates.

THE INTRAVENOUS USE OF CONCENTRATED PLASMA PREPARED BY THE ADTEVAC PROCESS*

J. M. HILL, M. D.
DALLAS, TEXAS

This paper reports the operation of a new laboratory service by which concentrated plasma is made available for routine intravenous use, by the blood bank of Baylor University Hospital and outlines the indications for this form of therapy based on the experience of this service to date. The plasma was concentrated by a new inexpensive process of drying from the frozen state. This method of desiccation, a description of which has been reported elsewhere,[4] was worked out jointly with D. C. Pfeiffer and designated the Adtevac process. It was developed to meet the need for the economical preparation of large volumes of plasma which may be preserved indefinitely in the dried form or may be redissolved in a proper volume of water to make a liquid plasma of any desired dilution or concentration up to four times normal.

A growing appreciation of the clinical importance of the plasma proteins and the widespread effort to support blood protein levels has been reflected, first in the literature on blood banking and more recently in the reports on the use of whole plasma. Levinson, Neuwelt and Necheles,[7] and Strumia, Wagner, and Monaghan[11] have shown the superiority of plasma over whole blood in the treatment of shock, while Elliott,[3] and Lehman,[6] and McClure[9] have reported its advantages in the treatment of burns. Madden, Finch, Swalbach and Whipple[8] contributed to our knowledge of the physiology of the plasma proteins, particularly in regard to their storage in reserve depots, the availability of these stores and their importance in infection.

In this report the use of concentrated plasma is emphasized and its use is advocated over whole plasma for general routine intravenous use. We believe this to be a logical and definite advance in the evolution of intravenous protein therapy. Concentrated serum was used in nephrosis by Aldrich, Stokes, Killingsworth, and McGuiness.[1] In dogs, Bond and Wright[2] showed the effectiveness of concentrated serum in the treatment of shock while Hughes, Mudd, and Strecker[5] demonstrated its successful use to reduce cerebrospinal pressure. However, no reports have been found to indicate the general intravenous use of concentrated plasma as a routine service comparable to blood transfusions.

The concentrated plasma department of Baylor Hospital functions as a division of the blood bank. Blood can be deposited and a credit given either for whole blood or for concentrated plasma. Also, plasma is withdrawn from blood which is outdated at the tenth day and serves to counteract inevitable losses which tend to occur, particularly with the charity services. Before processing, the various types of whole blood are pooled at low temperature and the plasma quickly withdrawn. Removal of the agglutinins results from adsorption on the corresponding red cells and produces a neutral plasma which may be given safely without regard to type and in any desired concentration or amount.

The indications for the use of plasma are proving in our experience to be as broad as the indications for transfusions and it appears probable that this measure may largely replace the giving of whole blood. Only where red cells must be added to the patient's circulation, is transfusion definitely superior. On the other hand, plasma has many advantages. It must be noted, however, that only when dehydration of the plasma is instituted can the maximum advantages be realized. This is due first to the ability to concentrate the plasma and, second, to the fact that storage for long periods is possible in the dry form without any significant loss of biologic potency.

One group of indications for the intravenous use of plasma in the concentrated form depends upon its hypertonic effect. The increased osmotic pressure makes it possible to reduce increased cerebrospinal pressure such as is encountered in cerebral edema from head injuries and in eclampsia. It may also be used in pulmonary edema if proper precautions are observed. For example, with cardiac embarrassment there must be prior bleeding of sufficient extent to compensate for the expected increased blood volume as a result of the therapy. In nephrosis it seems likely that the hypertonic plasma should be more effective in the initiation of diuresis.

Plasma is indicated in shock in preference to whole blood except where the shock results from hemorrhage. Even in the latter case it is very effective until whole blood can be obtained. While whole plasma has been used with marked success in the treatment of shock we believe that concentrated plasma is superior in most instances since its action is to reverse the abnormal physiology of this condition. According to Moon,[10] a vicious cycle may be set up by a variety of causes, producing shock, with loss of volume flow of blood, tissue anoxia, capillary dilatation, and

*From the Department of Pathology, Hospital Laboratory Division, Baylor University College of Medicine, Dallas, Texas.
*Read before the Section on Clinical Pathology, State Medical Association of Texas, Dallas, May 15, 1940.

increased permeability of endothelium giving loss of water, crystalloids and proteins, which further reduces blood volume. With loss of fluid the red cells make up a greater proportion of the blood, giving the so-called hemoconcentration of shock. Whole plasma is superior to blood because it adds blood volume and dilutes this red cell concentration. Concentrated plasma, however, builds up blood volume by reversing the loss of fluid into tissue spaces, actually drawing fluid back into the vascular channels, thus correcting the abnormal physiologic changes of shock. It must be noted that all other methods of treatment, whether it be saline or whole plasma that is used, increase blood volume merely by addition and do not immediately tend to rectify the loss of fluid into tissue spaces. We, therefore, believe concentrated rather than whole plasma should be given in shock, a belief which is supported by our clinical results to date. If for any reason such as dehydration of the patient, additional fluid is desired, saline can be given after the plasma. A further advantage of concentrated plasma is that it may be given quickly and easily with an ordinary large syringe, a point of importance when we consider the emergency nature of the treatment of shock. For military use on the battlefield, this convenience and speed of operation would be of utmost value.

Burns constitute a very special and emphatic indication for plasma therapy, early for shock, later to stabilize water balance and replace the protein lost through the lesion, and finally to protect the liver against damage by sustaining the blood protein levels. The therapeutic flexibility offered by using concentrated plasma in burns has been illustrated in some of our cases. Any desired amount of saline can be given with the plasma if dehydration is present. On the other hand if the patient is edematous as a result of low blood proteins plus the administration of large quantities of saline or glucose, the concentrated form should be administered.

Concentrated plasma has been supplied by our blood bank to replenish or sustain blood protein levels in a wide variety of conditions where adequate protein could not be taken by mouth. Such conditions include cachexia of malignant tumors, gastro-intestinal operation with complications, unresolved pneumonia, radiation sickness following therapy to gastro-intestinal malignancy, and many others. In this miscellaneous group special mention should be made of the importance of adequate blood protein levels in the production of antibodies, as emphasized by Madden, Finch, Swalbach and Whipple.[8] This saturation of reserve protein depots and its relation to recovery from infection will probably prove to be one of our most frequent and important indications for plasma therapy.

In regard to dosage, we ordinarly do not exceed 100 cc. at one time, but we do not hesitate to repeat this dosage as often as necessary until a desired effect is obtained. For example, as much as 300 cc. of a four times concentrated plasma has been given in one afternoon in a case of eclampsia with low plasma proteins. Not until the last dose was given could any appreciable change in blood proteins be note, and then an abrupt and definite increase occurred. This effect is to be expected in cases with significantly lowered protein levels since upon administration of the concentrated plasma the depots are first satisfied before any substantial increase in the blood proteins can be found. Appreciation of this point is essential if proper clinical results from this type of therapy is to be expected.

The only contraindication we have encountered is where the additional blood volume and pressure built up as a result of the giving of concentrated plasma would be harmful, for example in cardiovascular conditions. Even here, if the hypertonic effect of concentrated protein is needed to reduce edema, it may be used, provided a quantity of blood is withdrawn which is equal to, or greater than, four times the volume of the plasma given.

It is not within the scope of this paper to give detailed clinical reports. However, our results to date can be briefly summarized to indicate the possibilities of this relatively new form of therapy. A total of 115 doses of concentrated plasma have been given to seventy patients, amounting to 9,927 cc. of four times concentrated plasma. This is equivalent in protein content to approximately 70,000 cc. of whole blood.

In this series there were two transient urticarial reactions and one febrile reaction. This reaction occurred when the intern further diluted the plasma with unsuitable pyrogenic distilled water. In every other instance there was no evidence of any febrile or other disagreeable response after administration of the concentrated plasma. Some benefit was observed uniformly in all cases, although in its minimum form this consisted of the increased strength expected from a substantial protein meal. The maximum results, however, were spectacular and in many cases of shock and cerebral edema appeared to be life saving. These cases will be included in a report of clinical results in another paper.

The value of the plasma service is best

illustrated by its growth. At first only the charity services were supplied, but later the private cases used more than the combined charity services, and last month (April) one-third of the blood drawn in the bank was used to prepare concentrated plasma. In the future we believe more plasma will be used than whole blood.

CONCLUSIONS

1. The operation of a routine laboratory service providing concentrated plasma for intravenous use is described.
2. The physiologic basis of the indications for this form of therapy is discussed.
3. The advantages of concentrated plasma over whole plasma and blood are presented.

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Baylor Hospital.

ABSTRACT OF DISCUSSION

Dr. Charles L. Martin, Dallas: Dr. Hill has asked me to discuss his paper because I have been deeply interested in the development of his apparatus and have been situated where I could observe it at close range. Some may not know that the serum concentrating machine which we have seen pictured here today is far more efficient than any built heretofore, and I feel that Mr. Pfeiffer and Dr. Hill are to be congratulated on the mechanical excellence of their equipment.

Many uses for the serum have developed in the hospital, and I have been much interested in what can be done for the emaciated cancer patient with this new preparation. It has been of special value in the treatment of cases with malignant lesions of the throat, esophagus, and epigastrium where radiation reactions are severe and interfere with nutrition. We have, on several occasions, been able to tide these patients through emergencies by the use of the serum, together with large doses of thiamin chloride given intramuscularly.

Dr. Hill (closing): There is one thing I would like to say, in defense of the Blood Banks. This question as to whether the prothrombin deteriorates in a short period of time seems to be somewhat open. Apparently it does not deteriorate as rapidly as we thought at first. At the end of two or three days there is still a relatively high content in properly preserved blood. When a request is made for this purpose we supply blood recently taken. We still handle it in the Bank with satisfactory results.

CRYSTALLINE SULFANILAMIDE IN COMPOUND FRACTURES*

WALTER G. STUCK, M. D.,
ERNEST A. MAXWELL, M. D.,
AND
RUDOLPH N. O. MONSALVO, M. D.,
SAN ANTONIO, TEXAS

Since sulfanilamide has been suggested for the treatment of nearly every type of infection,[1] one hesitates to propose another use for this phenomenal drug. Nevertheless it is worth while to pursue suggestions made in the Orthopedic Section of the Southern Medical Association at Memphis in November, 1939. Albert Key of St. Louis explained spectacular results obtained by sprinking crystalline sulfanilamide in compound wounds to forestall infections.[9] On the basis of his report, we began to use crystalline sulfanilamide in all compound fractures at the Robert B. Green Hospital and noticed immediate decrease in the infections.

THE EVOLUTION OF SULFANILAMIDE

As is well known, sulfanilamide was first mentioned in 1908 by Gelmo, a German chemist studying azo dyes.[7] Five years later Eisenberg noticed that certain azo dyes possessed bactericidal powers in vitro and suggested their possible use in medicine.[6] Mietzsch and Klarer in 1932 synthesized and patented sulfanamido-chrysodine and called it "prontosil."[11] Domagk, director of experimental pathology of the dye concern at Elberfeld, worked with Mietzsch and Klarer and discovered the specific power of prontosil to overcome streptococcic septicemia in mice.[5] After Domagk's report in 1935 prontosil began to be used experimentally in clinical medicine. In San Antonio we are proud of Dr. F. W. Steinberg's prior claim to the first use of prontosil in this part of the country. He came from Freiburg, Germany, to serve a residency in the Nix Hospital and in June, 1936, administered prontosil to a patient with acute left mastoiditis and lateral sinus thrombosis. This was nearly a year before articles began to appear in American journals on the action of this new drug. Long and Bliss of Johns Hopkins have since 1937 reported studies of sulfanilamide and its derivatives and have thus brought this entire subject to the attention of the medical world.[10]

*From the Orthopedic Surgery Service of the Robert B. Green Hospital, San Antonio, Texas.
*Read before the Section on Surgery, State Medical Association of Texas, Dallas, May 15, 1940.

SULFANILAMIDE IN BONE INFECTIONS

Various preparations of sulfanilamide have been used in the treatment of a vast number of disease conditions with much success. Quite naturally efforts were made to determine if sulfanilamide would be of beneficial effects on infections in bone. Bohlman, who is at Johns Hopkins with Long and Bliss, in 1937 proposed the oral administration of sulfanilamide to patients who had received crushing injuries or compound fractures.[2] Later he tried the local application of crystalline sulfanilamide to compound wounds but with indifferent success. He did find, however, that this latter method was very effective against the gas-forming anerobic organisms. Sinclair, a Canadian dentist, placed crystalline sulfanilamide in infected tooth sockets and in a compound fracture of the mandible, and observed more prompt healing with a decrease in drainage.[12] Chandler applied sulfanilamide to the open wounds of chronic osteomyelitis and was favorably impressed with the results.[4] Weidekamp treated sixty-four patients with chronic osteomyelitis by the oral administration of prontosil and obtained marked improvement in twenty-six cases.[15] Jensen, Johnsrud, and Nelson, internes in the Minneapolis General Hospital, reported in July, 1939, the use of crystalline sulfanilamide in thirty-nine compound fracture cases with no subsequent infections, whereas previously in the same hospital similar wounds became infected in 27 per cent of cases.[8] Key examined the Minneapolis experiments and confirmed them by the application of sulfanilamide to compound fractures in animals. He found that there was no interference with healing of the fractures or the soft tissues and that the wounds were apparently sterile a few days after this treatment.

ACTION OF SULFANILAMIDE IN COMPOUND WOUNDS

Sulfanilamide in the blood stream is rapidly distributed to all the soft tissues but bone is reached more slowly because the water concentration is much less.[1] Large, single doses of sulfanilamide by mouth can produce as much as from 15 to 20 mg. per cent concentration in the blood stream for about twenty-four hours after which there is rapid decrease. Local application of crystalline sulfanilamide in an open wound makes possible a nearly saturated solution (.8 per cent —1.0 per cent in serum or 800 mg. per cent). Hence when the crystals are placed in the tissues about a compound wound there is a solution of sulfanilamide at the fracture site, which is almost forty times as concentrated as that which can be produced by oral administration and the effects persist for a much longer period. This "deposit effect" is similar to that attained by local injections of bismuth in the body or by the use of protamine zinc insulin.

The bactericidal and bacteriostatic powers of sulfanilamide increase in higher concentrations and these saturated solutions are effective against the Staphylococcus aureus and certain strains of gas-forming anerobes almost as much as they are against streptococcus.[2, 8]

It has been noted that the rate of healing of experimental wounds in soft tissues of dogs which have been given sulfanilamide is retarded.[3] This primary delay lasts three or four days and healing then progresses normally. Key found, however, that in experimental compound fractures where large amounts of sulfanilamide were applied locally there was no appreciable retardation in the rate of healing of the fractures or of the skin wounds.[9]

OBSERVATIONS ON TWENTY-SIX CASES

The street accident cases commonly seen in a large charity hospital are usually dirty patients with soiled clothing who are knocked down by automobiles grossly contaminated with manure. The patients are often drunk or in poor general condition. Reports from a number of such hospitals reveal the incidence of infections after compound fractures to be from 10 to 14 per cent with gas gangrene occurring in from 8 to 10 per cent of cases.[8] Our experience on the orthopedic service at the Robert B. Green (City-County) Hospital has been average in type of cases, incidence of infections, and mortality.

December 1, 1939, we began to use crystalline sulfanilamide in all compound fractures and this report is based on twenty-six consecutive unselected cases. Twenty-one cases were fresh compound fractures seen shortly after the accident and data on them are given in table 1.

TABLE 1.—*Recent Cases.*

	No. of Cases
Fractures of bones of the hand	7
Fractures of tibia	7
Fractures of the jaw	3
Fractures of the femur	3
Fractures of bones of the foot	1
Total	21

Five additional cases were of old compound fractures, in which chronic osteomyelitis had been present for many months, as listed in table 2.

TABLE 2.—*Old Infected Compound Cases.*

	No. of Cases
Fracture of the ulna	2
Fracture of the tibia	2
Fracture of the femur	1
Total	5

Of the twenty-six cases, primary union was obtained after operation in twenty-two. Two fresh cases developed osteomyelitis (one a compound dislocation of the ankle, the other a badly macerated compound fracture of the tibia). Healing has not yet occurred in two of the old osteomyelitis cases. There was no case of gas gangrene.

In contrast to the usual procedure all wounds were closed without drains and yet no fresh compound fracture developed gas gangrene and only two developed osteomyelitis.

It must be made clear that the local use of sulfanilamide does not in any way take the place of thorough cleansing and debridement of wounds. Washing with green soap, alcohol and ether, flushing of the wounds with quantities of sterile saline solution, and removal of crushed skin and foreign material are just as important with this method as before.

The administration of prophylactic antitetanic serum and anti-gas serum is likewise equally important. We are coming to believe, however, that since the high local concentration of sulfanilamide seems to be specific against the gas-forming anerobes and since anti-gas serum is not invariably effective it may be safe to omit the routine use of the anti-gas serum. We have not yet taken this step but will probably do so as our experience increases. The prophylactic administration of x-ray therapy over compound wounds, which was a routine procedure, has been discontinued for we have complete confidence that gas gangrene will not develop in wounds treated with sulfanilamide.

For more than a year we have been giving prophylactic doses of sulfanilamide by mouth and this has caused a decrease in the incidence of infections in compound fracture cases. Now this oral administration has been abandoned because we feel that high local concentrations of sulfanilamide are far more effective than any other methods of administration.

TECHNIQUE OF APPLICATION

As patients with compound fractures are admitted to the emergency room the usual preliminary measures are taken to combat shock. Extremities are splinted temporarily until treatment can be directed to them. In the operating room the extremity is cleaned thoroughly with green soap and warm water and shaved. The skin is prepared with ether, alcohol and mercresin. After the wound is draped it is flushed with large quantities of warm saline and all foreign material, crushed tissue, and contaminated areas are scrubbed. Pieces of necrotic tissue are trimmed away, bleeding vessels are ligated, lacerated muscles and tendons sutured, the fractures reduced. If there is severe comminution or if the fragments cannot be retained properly by traction on the extremity, a vitallium plate is applied or vitallium screws or nails used to anchor the fragments.[14] This new non-electrolytic alloy is totally inert in the bone and hence causes no irritation which will aggravate the infection.

Fifteen or twenty grams of crystalline sulfanilamide is then sprinkled in the wound and spread thinly over all exposed surfaces. The excess powder is wiped off, the skin edges are brought together and sutured snugly without drains. If there are large areas which cannot be covered with skin or if skin flaps have been torn off, the wound is covered with vaseline gauze. This seals the sulfanilamide in the wound. Casts or splints which are needed to immobilize the extremity in the proper position are applied and subsequent postoperative care is similar to any other case of severe compound fracture.

It is often asked how the sulfanilamide is sterilized before operation. This is not necessary since the action of the drug itself is bactericidal and sterilization of it seems to have no effect on the end-results. The crystalline drug is purchased in a container from which it can be poured directly into a sterile glass and placed on the operating table. Crushed sulfanilamide tablets do not serve as well because they contain a large proportion of lactose filler to make them more palatable and this dilutes the effectiveness of the powder in a wound.

Provision for drainage of these wounds is inadvisable since the constant secretion of serum will cause the sulfanilamide solution to wash away. This reduces its opportunity to remain in the wound in high concentration for several days to combat the infection. Of course, if patients develop pain and fever, wounds must be examined to see that no fluid is accumulating under tension.

If wound healing is delayed or if they break open the sulfanilamide crystals can be sprinkled in the wound again from seven to ten days later. This causes the drainage to decrease rapidly and hastens eventual healing.

In old cases which have already developed osteomyelitis, the infected bone is removed, the deformity is corrected and sulfanilamide placed in the wound in a manner similar to that already described. Even in these cases the wounds should not be drained because the sulfanilamide dissolved in serum will thus seep out into the dressings.

CONCLUSIONS

1. A saturated solution of sulfanilamide in blood serum is about eighty times as con-

centrated as the amount in the blood stream after oral administration.

2. Concentrated solutions of sulfanilamide have strong bacteriostatic effects on streptococci, staphylococci, and the gas-forming anerobic bacteria.

3. Crystalline sulfanilamide applied locally to compound wounds seems to stop bacterial growth and prevent the development of infections. The implantation of the drug produces a "deposit effect" which prolongs the action and increases the bactericidal properties.

4. In twenty-one fresh compound fracture cases treated with the local application of sulfanilamide, nineteen healed promptly without any evidence of infection. Two cases developed osteomyelitis. In five old compound fractures with pre-existing osteomyelitis, three healed promptly after operation and two are still draining although they seem to be recovering.

5. The reduction of compound fractures and primary fixation with vitallium plates and screws insured union in good position rather than the common malunions or nonunions of former years.

6. Compound wounds treated with locally applied crystalline sulfanilamide have shown a marked decrease in the incidence of infections and osteomyelitis. Gas gangrene seems to have been eliminated as a hazard in such cases. This method seems to offer a far better chance of primary healing of compound fractures than with any previous treatment.

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414 Navarro.

ABSTRACT OF DISCUSSION

Dr. James W. Hendrick, Amarillo: Dr. Stuck has given an excellent discussion of this very important subject. For some time I have followed with interest the excellent work that he and Dr. C. S. Venable have done on the use of vitallium plates and screws. They are to be commended for their work.

About two and one-half years ago Dr. Earl McBride of Oklahoma City called my attention to the use of sulfanilamide in severe lacerated wounds and compound fractures. He stated that since their Bone and Joint Hospital had begun the routine use of the powdered drug in such wounds their results were greatly improved. Dr. Don S. Marsalis of Amarillo about two years ago used a very large amount of powdered sulfanilamide in a double compound fracture where there was extensive soiling of the tissues. The fractures were such that he thought it advisable to use bone plates at that time. He watched the blood count and urine for several days afterwards to see if there were any deleterious effects.

We have used the powdered drug for the past year and one-half in all potentially infected and infected wounds, also in compound fractures. Fortunately we have not had a serious infection since we began its use. We have on several occasions used vitallium plates and screws in compound fractures and packed the wound with 150 to 200 grains of powdered sulfanilamide. The results have been uniformly good. Before the advent of sulfanilamide it would have been considered rank heresy to put a bone plate in an infected wound, especially a compound fracture when first seen. (It may yet be considered such by some men who are not acquainted with its excellent use.) By the use of vitallium plates and screws there is less likelihood of infection, as shown by Stuck and Venable. We can and have treated our fractures better and quicker than we could before the use of vitallium plates and screws and sulfanilamide.

Of late I have used crystalline sulfanilamide in all cases in which I have done open reduction of fractures. It has been shown that the drug does not interfere with healing and is definitely bactericidal. I have found it advantageous in chronic osteomyelitis to leave from 150 to 200 grains of the powdered drug in the wound after the diseased bone has been removed.

AMINOPYRINE REQUIRES PLAIN LABELING

All products containing the drug aminopyrine should have that name plainly written on the label rather than its complex chemical name, Oscar Berghausen, M. D., Cincinnati, advocates in *The Journal of the American Medical Association* for April 20 in reporting a death from the use for arthritis of a preparation called causalin. Dr. Berghausen says that many physicians are not familiar with the complex chemical nomenclature for aminopyrine, a drug which may cause a deficiency of white blood corpuscles. In the case reported by him such deficiency resulted in the death of the patient who had taken three capsules of causalin a day over a period of a month. Other deaths from causalin have been reported and the drug has been the subject of condemnatory reports by the Council on Pharmacy and Chemistry of the Association.

SULFANILAMIDE: ITS MODE OF ACTION AND TOXIC AND UNTOWARD EFFECTS*

BAILEY R. COLLINS, M. D.
WICHITA FALLS, TEXAS

May 17, 1933, was a red letter day in the annals of clinical medicine. On that date a brief report was given by Dr. Foester before the Dusseldorf Dermatological Society in which he described the action of a synthetic drug "Prontosil" on streptococcal infections in mice. No other work was done on this drug until February, 1935, when Gerhard Domaghs reported the results of his work with a relative non-toxic red dye, prontosil. He found that when the drug was given by mouth in small doses, mice did not succumb to fatal doses of hemolytic streptococcal infections. He also stated, "Prontosil was without a bactericidal effect in vitro, and acts as a true chemotherapeutic agent only in the living animal." This was the birth of modern chemotherapy.

The advance of chemotherapy is the most brilliant and the most useful achievement in modern medicine. These epoch-making discoveries in the past few years have advanced scientific medicine to a stage of efficiency not dreamed of by our predecessors. It is my opinion that we are just now entering this new field and before many years have passed many new chemotherapeutic agents will be perfected that will control the Streptococcus viridans of acute rheumatic fever, and the staphlococcus of osteomyelitis, the virus of poliomyelitis, and many other still unconquered infections. The chemical formula of sulfanilamide will reveal the unlimited compounds that can be made from this molecule by the addition or subtraction of certain elements or combination of elements. Not since the discovery of salvarsan by Ehrlich has this line of research had the attention and stimulation as at the present time.

The mode of action of the drug is not very clearly understood. The disagreement is largely due to the different methods of experimentation, the different media, the different strains of streptococci of different virulence. Keffer[7] and Rantz[8] found that the main action on the streptococcus was bacteriostasis. This action could be demonstrated if the concentration of the sulfanilamide was from 7 to 10 mg. per 100 cc. and the concentration of the organisms was not too great. These investigators also found that for certain strains of the hemolytic streptococci, the drug was also bactericidal. They were able to demonstrate that the blood serum from patients whose serum had a concentration of 7 mg. of sulfanilamide per 100 cc. of blood was definitely bacteriostatic for the hemolytic streptococcus. Another important observation they made was that the presence of antibody and sulfanilamide was much more effective than either of these agents alone. From a practical standpoint in therapeutics, it has been found that a patient who possesses antibody for a specific infection derives much more improvement from the administration of sulfanilamide than one who has little or no antibody formation. With a local infection the formation of this specific antibody is far greater than where a systemic or bacteremic infection exists. The conclusion of this work is that these conditions exist.

The drug produces a stasis of the infecting organism and the natural biological immune processes of the individual produce the destruction of the bacteria. These immune bodies are increased in the sick individual if small transfusions of whole blood are repeated at frequent intervals. The addition of whole blood not only increases the amount of antibody, but also helps to overcome the secondary anemia and cyanosis which is usually present. Transfusions are of considerable aid to sulfanilamide therapy.

It was demonstrated by Gray and his associates,[3] that in the rabbit infected with the streptococcus, recovery occurs when the mononuclear cells accumulate at the foci of the infection even though the rabbit is receiving adequate amounts of sulfanilamide. Other studies prove that the drug does not inhibit antibody formation and does not alone increase phagocytosis.

The consensus of opinion by investigators is that sulfanilamide inhibits the growth of the invading organism and produces a stasis or localization of the infection so that the body may build up its immune bodies which destroy the organisms, and recovery ensues.

TOXIC MANIFESTATIONS OF SULFANILAMIDE

The fear of toxic manifestations has caused many physicians not to use a drug that is very useful and at times even lifesaving. At the same time, this fear has caused a great deal of caution to be exercised in the administration of the drug.

First, I shall discuss the mild or less severe toxic reactions:

(1). *Cyanosis* is the most common toxic effect that is encountered in the administration of sulfanilamide and prontosil. It is less rarely encountered with the use of sulfapyridine. In the experience of Long and Bliss,[9] cyanosis has not been an alarming toxic manifestation and is not in direct pro-

*Chairman's Address delivered before the Section on Medicine and Pediatrics, State Medical Association of Texas, Dallas, May 15, 1940.

portion to the dosage of the drug. It may occur from the administration of 7.5 grains, while others may take 150 grains daily without this effect. The cyanosis rapidly clears up when the drug is stopped and entirely disappears in thirty-six or forty-eight hours.

This cyanosis was attributed to the formation of sulfhemoglobinemia by Colebrook and Kenny[1] and several other investigators. It was their opinion that the sulphur was derived from the administration of magnesium sulphate or other compounds containing sulphur. Following this report, many physicians would not use codeine sulphate or morphine sulphate or even give a diet containing eggs. This has been disproved by subsequent investigation and no sulfhemoglobinemia has been found in the blood of patients who have marked cyanosis.

Methemoglobin has been identified by numerous observers; however, the amount of methemoglobinemia present is hardly enough to account for the degree of cyanosis.

It has been found that the administration of methylene blue by mouth in one and one-fourth grain dose every four hours to an adult, will clear up the cyanosis rapidly. By some, the cause of the cyanosis is considered to be due to the formation of a new compound within the red blood cells, the nature of which is not well understood. More investigation along this source is necessary before the final decision can be reached.

(2). *Nausea and vomiting.*—This is a common toxic effect and very troublesome with the administration of sulfapyridine. As this drug is insoluble and cannot be given in any other way, this complication at times is quite a problem. The administration in milk or in a colloidal suspension such as gelatin is frequently helpful. The drug cannot be administered by rectum or into the subcutaneous tissues, and hence of necessity must be given by the oral route. The nausea, vomiting, giddiness and weakness usually appears during the first twenty-four hours, and if the drug is discontinued for several hours, then the secondary administration may be successful. If the patient continues to vomit, care should be exercised in the continuation of the drug because this is frequently an early sign of a more serious toxic manifestation as granulocytopenia or hemolytic anemia.

(3). *Acidosis* is another minor toxic reaction. Long and Bliss[9] called attention to this complication soon after the drug made its appearance. Hartman and his associates[6] considered this a type of alkalosis with hyperventilation, but other experimental work has shown that a true acidosis exists following the administration of sulfanilamide. Soda bicarbonate has been administered with the drug, and as a result no severe alkalosis has been reported and the acidosis is easily controlled.

(4). *Dermatitis or skin eruptions.*—There are many types of skin eruptions that occur during the administration of this drug. They are usually noted within seven to nine days after the drug is started. These eruptions are of various types: macular, erythematous, morbilliform, urticarial or purpuric. It was reported early that these eruptions were either precipitated or made worse by sunlight. The rash may be generalized or may involve only the buttocks and legs or the hands and soles of the feet. Hageman and Blake[4] noted that some form of skin eruption occurred in 6.7 per cent of patients receiving sulfanilamide.

Urticarial manifestations are frequently rather common and occasionally rather severe. Generalized edema may result. Exfoliative dermatitis is a severe toxic reaction and resembles in many respects the exfoliative dermatitis due to arsphenamine. The onset is with fever, malaise, and edema, especially of the eyelids, and an erythematous, pruritic rash which soon becomes generalized. In due time these patients recover, but the patch test with sulfanilamide usually remains positive. It is well to ascertain if the patient has had any skin reactions from the drug before treatment is begun. Because of the extensive use of the drug, we will encounter more cases of this type, as more cases of idiosyncracy or sensitivity will develop. If no depression of the hematopoietic system develops, these patients usually recover. Patients who are receiving the drug should not be exposed to the sunlight; and, if any type of skin reaction occurs, the drug should be stopped immediately and fluids should be encouraged.

SEVERE TOXIC REACTIONS

(1). *Fever.* In the original report by Long and Bliss, it was noted that sulfanilamide and neoprontosil were capable of producing fever, and many other investigators have made the same observation. Hageman and Blake[4] have reported that 15.6 per cent of 134 patients treated with sulfanilamide developed this toxic symptom between the seventh and tenth days after the cessation of the drug. The fever usually comes on suddenly and is frequently accompanied by a morbilliform rash. It has been noted that fever is often the initial sign of a serious toxic manifestation as hepatitis, acute hemolytic anemia, or agranulocytosis.

It is often difficult to distinguish drug

fever from the fever produced by the infection which is being treated. After treatment for seventy-two hours, the fever due to infection should be normal or only slightly elevated, and the patient should appear to be much improved. If after four or five days, there is a chill with sudden rise of fever, accompanied by malaise and general discomfort, drug fever should be suspected, the drug stopped and fluids should be forced; if in doubt, the drug should be stopped. Long and Bliss[9] observed that in patients who have had drug fever, the readministration of the drug will produce a reoccurence of the syndrome. A small test dose of 2.5 grains should be given to the patient to detect the reaction before the usual dose is given. These patients will also develop fever from the administration of other related compounds as sulfapyridine and benzyl sulfanilamide. The mechanism by which the fever is produced is not understood, but it is supposed to be due to a toxic effect on the heat regulating center of the brain.

(2). *Anemia* is a severe toxic reaction. There are two types of anemia encountered during sulfanilamide therapy: (1) acute hemolytic anemia, and (2) chronic slowly progressing anemia.

Acute hemolytic anemia was first described by Harvey Janeway,[6] who reported three cases, and W. B. Wood,[10] who found an incidence of 8.3 per cent in children and 2.4 per cent in adults in the Johns Hopkins Hospital. It is logical to presume that sulfanilamide, which contains a benzene ring and which is closely related to the aniline dye group, is capable of producing rapid destruction of the red blood cells. In the cases reported, the drug acts like phenylhydrazine and produces rapid lysis of the red blood cells. The patient becomes slightly jaundiced, and hemoglobinemia occurs with an abrupt fall in the red cell count and in the hemoglobin. This phenomenon is accompanied by chills, fever and malaise. As soon as the condition is recognized, the drug is stopped and multiple small blood transfusions are given, for the hemoglobin must be maintained above 50 per cent. Under this treatment, the patient usually recovers. The onset of this anemia usually occurs on the fifth or sixth day of treatment and is apt to recur, if the drug is readministered. There is no correlation between the amount of sulfanilamide administered, or the amount in the blood, and the development of the anemia.

(2). In the chronic slowly progressive type of anemia, the situation is quite different. Here we are confronted with the necessity of determining whether the anemia is due to the infection, or to the sulfanilamide. I am sure that this rather severe anemia is commonly seen, as in specific urethritis. This is especially true in cases in which the treatment extends over several weeks. The hemoglobin often drops below 50 per cent and the red cell count below 3,000,000. In this condition, repeated small transfusions with iron by mouth will improve the patient a great deal.

(3). *Agranulocytosis — Malignant Neutropenia.*—This is by far the most serious toxic reaction encountered in sulfanilamide therapy. Here again we recognize that the benzene ring is a very toxic compound and is capable of great depression of the hematopoietic system. The toxic mechanism is not well understood, but apparently it is analagous to the agranulocytosis which follows the administration of amidopyrine. To date eighteen cases have been reported in the literature. These cases have followed the administration of prontosil, neoprontosil, sulfanilamide, benzyl sulfanilamide, and sulfapyridine. Apparently, this complication is not associated with the age, sex, type of disease under treatment, the amount of drug administered, or the duration of the illness. The mortality rate is in the neighborhood of 80 per cent.

The agranulocytosis usually appears between the fourteenth and the twenty-first day; however, it may occur as early as the sixth day. A skin eruption is usually the first manifestation, and the leukocyte count is usually about 2,500 with 20 per cent to 30 per cent polymorphonuclear cells. This count continues to drop and symptoms of marked sepsis develop, with ulceration of the mouth, throat and gums. Fever, chills, malaise and headache are present. Usually in spite of multiple transfusions the patient does not improve.

The drop in the leukocyte count often appears rather suddenly and often during the first week of the disease. For this reason white cell counts should be done frequently during the course of the illness, and unless there is clinical improvement with the drop in the count, the drug should be stopped at once. For this reason patients who are under treatment with this series of drugs should have our closest observation and care, as these severe toxic reactions occur very quickly.

(4). *Toxic Hepatitis.*—A simple jaundice occurring during the course of hemolytic anemia is usually transient, soon clears after cessation of the drug, and is not an indication of serious liver damage.

If jaundice, enlargement of the liver and a decrease in the liver function test is found,

then a diagnosis of toxic hepatitis from sulfanilamide is justified. This is a serious complication. Garvin[2] reports five cases, one of which was fatal. In some cases there is marked anemia, splenic enlargement, exfoliative dermatitis and ascites, indicating profound liver damage. Recovery usually follows the administration of large quantities of glucose.

From this review it is evident that many symptoms, signs and reactions may occur from the administration of this group of drugs. These may be grouped in their order of appearances as follows: first week—(1) cyanosis, (2) nausea and vomiting, (3) acute hemolytic anemia; second week—(1) fever, (2) skin eruptions, (3) toxic hepatitis; and third week—(1) agranulocytosis, and (2) chronic progressive anemia.

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Hamilton Building.

ROOFERS LEAD POISONING

The possibilities of lead poisoning among roofers due to the habit of holding nails in their mouths before driving them are pointed out in *The Journal of the American Medical Association* for April 20 by Harold J. Magnuson, M. D., and B. O. Raulston, M. D., Los Angeles, who report eight instances of the condition traceable to the use of galvanized nails.

Their patients complained of colic and constipation shortly after they began using galvanized nails, which contained much more lead than the nails formerly used. These men had been told not to put the nails in their mouths but to wear "strippers" or pouches to carry the nails. However, the authors explain, "since they are paid by the square foot of roof finished it is impossible to shingle fast enough to make an adequate wage unless they hold the nails in their mouths.

"One patient reported that his daily wage dropped from $7 or $8 a day to $3.50 a day when he started to use a 'stripper,'" they say.

Manufacturers of the nails have agreed to cooperate by coating the nails with an alloy of tin and zinc, the two physicians report.

SULFANILAMIDE IN THE TREATMENT OF UNDULANT FEVER*

WILL S. HORN, M. D.
FORT WORTH, TEXAS

During the past decade undulant fever has stood as an unanswered challenge to modern therapy. No treatment has achieved recognition in its control and it was natural that chemotherapy should be tried. Since its advent in 1935, the use of sulfanilamide and its derivatives in the treatment of undulant fever has been reported by numerous observers, but of these 50 per cent reported single cases and only 10 per cent had treated more than six. This is not mentioned in disparagement but to call attention to the lack of effective study of its values and the more or less casual, everything-to-gain-and-nothing-to-lose basis for its use in a worrisome therapeutic problem.

To be effective a chemotherapeutic drug should destroy all organisms within the host, or through its bacteriostatic action give advantage to the host in accomplishing a more prompt and complete active immunity. Whether chemotherapy may be effective in recovery from infections which are self-limited through natural immune processes may be questioned. Especially may this be true of a disease so baffling as brucellosis but initial successes have encouraged its further application.

There is experimental evidence to justify the use of sulfanilamide and associated compounds in the treatment of brucellosis. Chinn[7] found that it is bactericidal and bacteriostatic to Br. melitensis, Br. abortus, and Br. suis in vitro. He concludes that the drug is 100 per cent protective to guinea pigs inoculated if treatment is begun immediately, and that it is 50 per cent to 100 per cent effective in treating guinea pigs so inoculated when treatment is begun one week after inoculation. He found it less effective against Br. melitensis than Br. abortus or Br. suis inoculated pigs. Welch, *et al.*,[26] found "an average increase in opsonic activity from 20 per cent to 97 per cent of marked phagocytosis in brucella infected guinea pigs following treatment with sulfanilamide." Hamann and Huddleson[12] recently reported sulfapyridine in vitro has definite bacteriostatic effect on Br. abortus but in inoculated guinea pigs "the per oral administration of sulfapyridine in large amounts over a period of ten days had little if any effect on the course of brucella infection."

The evaluation of any treatment procedure in such a deceptive and unpredictable disease

*From the Medical Division, Harris Clinic, Fort Worth, Texas.
*Read before the Section on Medicine and Pediatrics, State Medical Association of Texas, Dallas, May 15, 1940.

as brucellosis is most problematical. It is doubly difficult because of the uncertainty of interpretation of the diagnostic criteria as well as the objective data by which one may conclude that any given case of brucellosis is still active or has reached the stage of immune protection. Furthermore, interludes of symptomatic quiescence may frequently be mistaken for a cure, or remissions by spontaneous immunity may and do occur irrespective of therapy. This may explain why sulfanilamide seems to be effective in some and not in others. On the contrary, this may be due to some biological variant as suggested by Lockwood and Lynch[16] in their studies regarding the influence of proteolytic products on the effectiveness of sulfanilamide in vitro, although they report no observations on brucella organisms.

Twenty articles in the literature have been reviewed (Table 1), reporting treatment of eighty-three cases of brucellosis with sulfanilamide or its derivatives. The daily dosage fluctuated from 1 Gm. to 6 Gm. and the total dosage from 7 Gm. to 72 Gm. The duration of treatment varied from thirty-six hours to twenty-three days and the reported results from flat failure to miraculous cures. One patient[23] remained well (six months observation) after treatment with only 7 Gm. of sulfanilamide given during a period of thirty-six hours. In many there was a tendency to re-

TABLE 1.—*Analysis of 83 Reported Cases of Undulant Fever Treated with Sulfanilamide.*

								Totals
Cases per report	1	2	3	5	6	20	25	83
Number of Reports	10	3	2	2	1	1	1	20

Results

	Number	Per cent		
Recovered	27	33%	Made worse by therapy	2
Improved	28	32%	Relapses after improvement	12
Failures	24	30%		
Died	4	5%	Ratio of improvement	2:1

Diagnostic Criteria

	Pos. Aglut.	Pos. Bl. Cult.
Brucella abortus	10	8
Brucella melitensis	35	13
"Undulant fever"	13	
Negative	4	

currences and return of febrile episodes or other clinical manifestations within a few days to three or four months. Often these subsequent episodes responded favorably to repetition of the drug and a point frequently stressed is the need to give it in adequate dosage over a sufficient period of time. Some authors are strongly impressed with the favorable effect of the drug; others report frequent or uniform relapse, while still others feel that the drug does not alter the course of the disease. Study of the compiled cases, the great majority of which were acute, indicates favorable influence on the disease in the ratio of 2:1.

Debono,[9] reporting the largest series (25 cases), concludes, "there was no appreciable effect on the agglutination titer or on the white corpuscles. I had the impression, however, that the prontosil interfered in some way with the development of natural immunity." He added, "in the 'septicemic' cases the effect appeared to be definitely harmful." Expressing a contrary opinion, Welch, *et al.*,[26] demonstrated actual increase in opsonocytophagic protection after administration of sulfanilamide in five reported cases. They concluded, "in brucella infections sulfanila-

TABLE 2.—*Results of Treatment of Undulant Fever in 54 Patients.*

SULFANILAMIDE—52		SULFAPYRIDINE—9	
Recovered	3	Improved	5
Improved	31	Not Improved	3
Not Improved	14	No Record	1
No Record	3		
SULFAMETHATHIAZOL—1		NEOPRONTOSIL—4	
Improved	1	Improved	1
		Not Improved	3

Ratio of Improvement

Total Series	2:1
Sulfanilamide Series	5:2
Sulfapyridine Series	5:3
Neoprontosil Series	1:3

One Course of Treatment	43
Two Courses of Treatment	10
Three Courses of Treatment	1

mide appears to act through stimulation of the defense mechanism by increasing the protection of specific opsonins." The writer[14] in a previous communication observes, "the phagocytic response (from sulfanilamide) has been marked a few times and moderate much of the time, but many times a reversal has occurred. Furthermore, I find that stimulation of phagocytosis under sulfanilamide is seldom sustained after withdrawal of the drug. The smaller daily doses proved more consistently effective."

Conflicting reports come from the Island of Malta. Neumann[18] treated twenty acutely ill patients and summarized his observations in August, 1938, as follows: "The effect on the temperature is usually prompt. In a majority prontosil acts in almost a specific manner, while in a minority the effect is disappointing. It greatly reduces the disability period if given early." He reported it ineffective in one, with recurrences in two, disappointing results in three, and gratifying in fourteen, with recovery in one case in ten days. He found oral more effective than parenteral administration and adds, "these drugs may eventually find a valuable place in the fight against this crippling and long drawn out disease." In a contrary view, Debono[9] in February, 1939, reporting on the treatment of twenty-five acute cases given a uniform daily dosage of 4.5 Gm. for seven days (in four it was prolonged for twelve days and in five stopped because of intoler-

ance) stated, "considering the very problematic results, its (sulfanilamide) use in Br. melitensis infection does not seem to be justified. In no case could recovery be attributed unequivocally to this line of treatment." (The forty-five cases above referred to were all Br. melitensis. Neumann's cases all were diagnosed by agglutination, while in Debono's group twelve had positive blood cultures and thirteen positive agglutinations).

The six cases treated by Bynum[6] were unimproved or had recurrences and Schroeder's[20] case continued active after 43 Gm. of neoprontosil over two periods totaling sixteen days. Smith and Curtis[22] report one case of Br. abortus endocarditis (blood culture and autopsy) that was refractory to three courses of sulfanilamide. Bethoux[3] reports a single case with positive Br. melitensis blood culture, in which the patient received 42 Gm. of rubiazol (similar to neoprontosil) over a period of thirty days, during which time the temperature slowly subsided to normal and the patient considered himself cured "although living organisms were still present in the blood." One of Traut and Logan's[25] patients, ill for eight weeks, jaundiced, in a stupor and with a positive Br. melitensis blood culture, was given a transfusion and after 2 Gm. of sulfanilamide daily, within forty-eight hours was free of fever and had remained afebrile twelve months. The total dosage and duration of medication is not mentioned.

There are definitely characteristic symptoms of brucellosis but they vary in individuals and from time to time so that subjective reactions cannot be relied upon wholly as a basis for evaluation of therapy. In the chronic form the symptoms so resemble those of the functional neuroses that protracted periods of complaint may discourage the physician and lead to a change of diagnosis or abandonment of therapy. Fever is inconstant and unpredictable and may hardly prove satisfactory as a basis for evaluation, although, when the temperature curve can be made to remain a flat normal, it is obvious that a great deal should have been accomplished and for the patient to feel better at the same time it is convincing. Agglutination reactions are fickle and unreliable and what they may connote is not agreed upon. Likewise, the opsonocytophagic reaction is too uncertain for determining the presence or absence of active infection or immunity. But if symptomatic relief can be achieved over a period of months, or if there is a progressive though slow disappearance of manifesting symptoms, a return of temperature to normal and development of protective blood findings following treatment with sulfanilamide, then its use is justifiable.

Three months ago I made inquiry of twenty-one representative internists in the Middlewest and Southwest regarding their experiences with sulfanilamide in the treatment of undulant fever. Fifteen replies were received and of these seven stated they had had no personal experience in the use of the drug in undulant fever. Five reported their results discouraging or of no benefit. One reported a chronic case that had no benefit from neoprontosil but showed marked improvement taking sulfanil sulfanilate. Another reported recovery of a patient in an acute case after taking 6 Gm. of sulfanilamide daily for ten days, whereas a second case similarly

TABLE 3.—*Effects of Sulfanilamide on Opsonocytophagic Index.*

Case	DOSAGE		OPSONO-CYTOPHAGIC READINGS				
	Daily	Total	Before	Days	During	Days	After
			MARKED INCREASE OF PHAGOCYTOSIS				
			St-Mo-Sl-N		St-Mo-Sl-N		St-Mo-Sl-N
C	20	200	2- 9-14- 0	10	21- 4- 0- 0	17	16- 4- 5- 0
M	80›40	500	1-10-14- 0	4	21- 3- 1- 0	126	24- 1- 0- 0
M	80	500	0- 3-14- 8	4	13- 8- 4- 0	35	6- 8-11- 0
W	20	500	0- 0-11-14	4	20- 4- 1- 0	5	23- 2- 0- 0
			MODERATE INCREASE OF PHAGOCYTOSIS				
E	20	500	0- 0-12-13	7	2-14- 9- 0	24	0- 1-16- 8
K	80	500	0- 8-17- 0	7	11- 5- 8- 1	36	0- 2-21- 2
R	20	500	0- 0-11-14	3	6-10- 9- 0		
				23	21- 4- 0- 0		
			SLIGHT INCREASE OF PHAGOCYTOSIS				
B	80	500	0- 0-13-12	6	0-20- 0- 5	78	15- 9- 1- 0
C	80›20	500	0- 0- 2-23	15	6- 7-12- 0	40	21- 4- 0- 0
				22	0- 1-23- 1		
			NO CHANGE OF PHAGOCYTOSIS				
V	80	440	0- 2- 4- 1	6	0- 2-23- 0	89	0-11-14- 0
S	60	300	0- 2-17- 6	5	0- 0-20- 5	40	22- 2- 1- 0
G	60›20	500	0- 6-19- 0	5	0- 7-17- 1	28	19- 6- 0- 0
						49	3- 9-13- 0
			REVERSAL OF PHAGOCYTOSIS				
A	80	500	23- 2- 0- 0	4	6- 6-13- 0	50	24- 1- 0- 0
L	90›40	500	0- 8-17- 0	9	0- 0-16- 9	11	6-14- 5- 0
S	60	500	11-12- 2- 0	9	0- 3-19- 3	112	2- 4-10- 9

Comparison of opsonocytophagic index in 15 patients before, during and after the period of sulfanilamide therapy.

treated showed "no improvement after sulfanilamide." The same clinician had treated four chronic cases "without any improvement whatsoever." Another observer had used the drug successfully in a boy of 7, with acute brucellosis, but "in five other acute cases there was no effect whatsoever," and of twenty-five chronic cases he had treated, "it

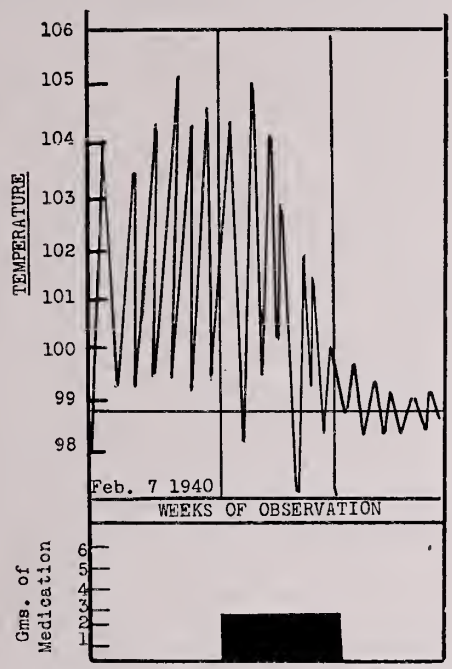

FIG. 1.—Temperature chart of a male, age 21, who recovered from acute undulant fever of two months duration, following sulfanilamide therapy.

was effective in only one which may have been a spontaneous remission."

In presenting a report on fifty-four patients who have taken one to three courses of sulfanilamide or its derivatives, we observe that the toxic side effects are no different to those seen from its use in other conditions. During therapy patients may complain of feeling much worse with accentuation of their aches and pains, weakness and strange, unpleasant feelings. On the contrary, when the period of therapy is past there is the opportunity to contrast their subjective reactions, and we find there is a favorable majority, who, by comparison, state that they were definitely improved following the use of the drug. This improvement is so definite in the minds of some that they have requested repetition of the treatment. One patient who had taken a course of both sulfanilamide and sulfapyridine, when given her choice, preferred sulfapyridine as benefiting her most in spite of its more unpleasant toxic side effects. Another who had had sulfanilamide, sulfapyridine, and sulfamethylthiazol again requested sulfanilamide. Several have refused to take the drug again because of the disagreeable toxic upset but this may be avoided by reducing the daily dosage or by substituting neoprontosil.

Only two of our cases were acute. In one of these (Fig. 1) sulfanilamide has been given the credit for a cure on 40 grains daily for seventeen days (the patient was fever-free on the tenth day and has had no recurrence after ten weeks), while the other (Fig. 2) failed to respond and eight months later the patient died although she was given three additional courses of the drug by her family physician. The acute febrile exacerbation of a third case was controlled but otherwise the patient continued unrelieved and quit his treatment. In fifty-two chronic cases we have voted it often of value though a number of times we have recovered the brucella organism from the feces after varying dosage and periods of sulfanilamide therapy.

The question of dosage is an important one. In the beginning I gave larger doses over shorter periods of time but by accident discovered that smaller doses over a longer period of time in the chronic cases seemed to have a favorable effect. Since that time my routine has been to give 20 grains daily for twenty-five days, repeating the courses every other month. The plan of giving it on alternate weeks has proven satisfactory a number of times. The average total dosage for a treatment period has been 500 grains, though four patients have taken 600 grains and one 960 grains. The percentage of improvement was not increased by giving the higher dosage and three were improved who had only 250 grains or less. The optimum dosage may be considered what one may take without too great toxic disturbance.

Subjective improvement is recorded in a majority of all patients treated in the ratio of 2:1. Under sulfanilamide, in a group of fifty-two, this ratio was 5:2 while in the smaller series of nine under sulfapyridine it is 5:3. These figures are comparable to those of the eighty-three cases in the literature herein reviewed where the ratio of improvement was 2:1. Four treated with neoprontosil voted three to one against improvement, whereas a single patient treated with sulfamethylthiazol stated she was improved but not to the same degree as when she took sulfanilamide. Ten patients took duplicate courses and of these five had sulfanilamide twice, three had one course each of neoprontosil and sulfanilamide, one had sulfapyridine following sulfanilamide and one had sulfapyridine twice. Another had sulfapyridine, sulfanilamide, and sulfamethylthiazol in separate courses in the order stated. Improvement appeared to be more

consistent and more effective after the second than after the first courses of treatment.

It has been stated that the opsonocytophagic index is unreliable both as diagnostic and immune criteria. The picture is quite confusing. In an appreciable number of individuals I have observed a rather marked rise in protective phagocytosis in from three to twenty-three days under sulfanilamide therapy. Frequently this phagocytic response soon subsides though it has been observed to increase still further during a variable period following withdrawal of the drug. I have many times been disappointed in failing to stimulate phagocytosis, and at others still more disappointed to observe a complete reversal of the phagocytic response under sulfanilamide. My observations in part substantiate the conclusions of Welch, *et al.*,[26] that its provocative influence on the opsonocytophagic index is of valuable diagnostic importance. Likewise, I am convinced after months of clinical observation that undoubtedly it stimulates phagocytic protection and otherwise favorably influences the course of the disease in a satisfying majority of patients.

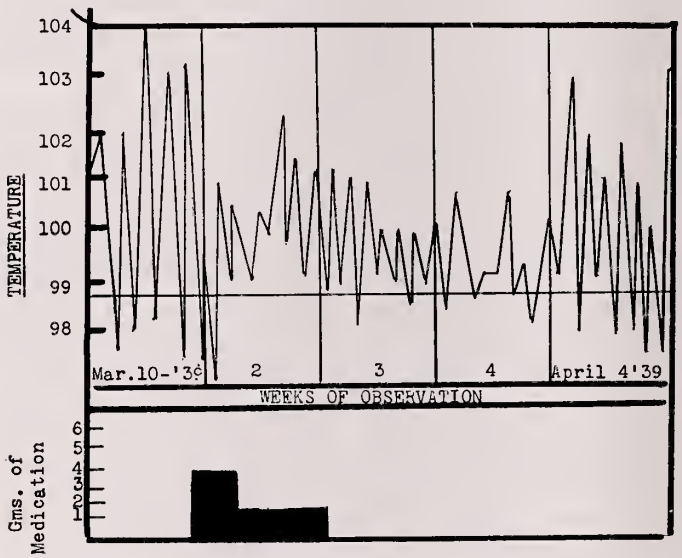

FIG. 2.—Temperature chart of a female, age 61, who had been ill for two months with acute undulant fever before treatment was begun. She died after eight months of intensive sulfanilamide therapy. Six courses were given covering sixty-nine days between March 14 and August 30, 1939, for a total dosage of 176 Gm.

The influence of specific vaccine therapy during and following sulfanilamide in our series of patients cannot be disregarded as a factor in the observed improvement. On the other hand, it was also used in those reporting no improvement. We believe that the regular and consistent use of specific vaccine both during and following the periods of sulfanilamide therapy is important. Bynum's[6] six patients with recurrences of fever following the administration of sulfanilamide promptly improved or recovered when given specific vaccine. In our observation the one appears to complement the other.

Just what the ideal treatment program may ultimately prove to be is unpredictable. For a while I was discouraged and swung away from the use of sulfanilamide in the chronic brucellosis patient but after making these studies, finding favorable temperature controls, and again hearing patients voice their reactions on the basis of subjective relief, I am swinging back to its use but in the smaller daily dosage over longer periods of time and repeated at biweekly or bimonthly intervals. At the present time I am prescribing 5 grains four times a day. One patient is taking sulfapyridine 7.7 grains four times a day and two others neoprontosil 5 grains four times a day.

No group deserves more patient consideration or a more earnest effort at solving their problem of relief than those afflicted with brucellosis. Whatever drug may accomplish bacteriostasis and relative sterilization of brucella foci within the body will be the one successful. In localizations such as the gallbladder, the appendix, the prostate, the gastro-intestinal tract, or the urinary tract, it may require protracted and repeated courses of the drug to achieve success. Whether sulfanilamide is that drug to accomplish this alone or complemented by specific vaccines, as yet is unanswerable. But just as modifications of the sulfanil radical have achieved better results in certain infectious diseases such as sulfanilamide in streptococcal infections, sulfamethylthiazol in staphylococcal infections and sulfapyridine in pneumococcal, gonoccal and meningococcal infections, so it is hoped that the field of chemotherapy may yet yield a sulfanil radical which will exert optimum effect on the elusive brucella organisms.

SUMMARY

1. Reports in the literature on the treatment of undulant fever with sulfanilamide are conflicting. Eighty-three cases reported by twenty observers are reviewed.

2. The author reports fifty-four cases of brucellosis in which sulfanilamide or its derivatives were given.

3. The use of sulfanilamide in the treatment of undulant fever is favored in both

series by an identical improvement ratio of 2:1.

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650 Fifth Avenue.

ABSTRACT OF DISCUSSION

Dr. J. W. Torbett, Marlin: Dr. Horn has presented an interesting discussion of the use of sulfanilamide in the treatment of brucellosis. I have had more than 140 cases in the past three years of the chronic type and only two of the acute type. In both of the acute types, sulfanilamide was given and both of the patients died. They were cases, however, with very serious complications to start with; one patient from Tampico, Mexico, had a syphilitic heart which he had had for several years, and I don't think he contracted the brucellosis until he came into Texas, about Laredo somewhere, and drank milk, because he got better of his heart trouble, and getting around nicely, going to picture shows and suddenly took the fever about three weeks after arriving here and went down and passed out, notwithstanding the treatment.

The second patient who died came from the western part of the State. This patient had had an operation for rectal trouble. After the operation she was getting along nicely for about ten days and then suddenly developed the fever. Her history showed that at the place where she had gotten her milk, the cow had had three abortions; that three of the children had symptoms of the disease; that the cow had been sold to a neighbor, three of whose children had the disease, all of which confirmed the diagnosis which was made by agglutination test.

About fifteen of the patients in chronic cases were given sulfanilamide and neoprontosil and none of them apparently were relieved. I feel sure that we have throughout Texas many of these cases of the chronic type of brucellosis indicated by a definite syndrome of nervousness, pain in the shoulders and probably the back and a tendency to be very tired all the time. These patients are helped very much by warm baths, massage, thiamin chloride hypodermically or intravenously, together with the intradermal vaccine, which is also a diagnostic method in these chronic cases, much better than any other method, though the agglutination test will show positive in 48 per cent of the cases, as shown by Evans. The intradermal vaccine, however, should be given in a dilution of 1:100 to start with because the full strength is too strong and will frequently make a place rot out in the arm where the test has been given, if it is positive. If the tested area remains several days with induration and pigmentation, that is a positive diagnosis along with the clinical symptoms, and the vaccines are given once every week or ten days together with the other methods of treatment outlined.

POISONING BY FOOD CLAIMS 606 IN 1938

With the season at hand when toadstools are picked and eaten for mushrooms, special interest attaches to food poisoning statistics in a report on "Fatal Accidents in the United States" just issued by the U. S. Bureau of the Census.

The report shows that in 1938, latest year for which statistics are available, there were 606 deaths from food poisoning in the United States. This figure compares with 665 in 1937, and is the lowest toll of any year in the 1933-38 period covered.

Food poisoning ranked thirteenth among accidental causes of death, and accounted for 0.6 per cent of all accident deaths. In terms of the estimated population for 1938, food poisoning killed one out of every 200,000 persons.

Children under one year old suffered most from food poisoning, with fifty-eight deaths in this age group, or 9.6 per cent of the total. Once infancy was past, the greatest number of fatalities from food poisoning occurred in the 45-49 and 50-54 years old classes, with forty deaths in each, or 6.6 per cent of the total.

Geographically, food poisonings were most common in the Southern States. Of the 606 deaths from this cause, 93 occurred in Texas, 35 in Georgia, 31 in Florida, 31 in Alabama, 28 in North Carolina, 28 in Oklahoma, 25 in Kentucky, 23 in Tennessee, 21 in Louisiana, 21 in Mississippi, and 20 in Missouri.

Cities of 100,000 or more population reported only 90 out of the 606 deaths from this cause, or 14.9 per cent of the total, although according to the 1930 census 29.6 per cent of the population lived in such places.

In its "Manual of Causes of Death" which the Census Bureau issues to guide physicians and other persons who make out death certificates, from transcripts of which the statistics in the current report were compiled, the following types of food poisoning are among those listed: Botulism; cheese poisoning; damaged meat poisoning; diseased food; egg-albumen poisoning; fish poisoning; icthyotoxicum poisoning; milk poisoning; mouldy bread poisoning; mushroom poisoning; mussel poisoning; pork poisoning; potato poisoning; sausage poisoning; shellfish poisoning; tyrotoxicon cheese poisoning.

FOREIGN BODIES IN THE STOMACH OBSERVED THROUGH THE GASTROSCOPE: REPORT OF FIVE CASES*

CECIL O. PATTERSON, M. D.
AND
MILFORD O. ROUSE, M. D.
DALLAS, TEXAS

The use of the flexible gastroscope as designed by Schindler has revealed the most interesting information about normal and pathological conditions of the stomach wall itself. The instrument also makes it possible to see with certainty foreign bodies which may be within the stomach. X-ray study is usually conclusive. While gastroscopic visualization of foreign bodies within the stomach at this time is of most thrilling historic interest, it is also of importance in that it aids in establishing the presence of foreign bodies, may give added information as to the probable nature of such bodies, and is also an aid in evaluating associated conditions of the stomach mucosa.

Reports in the literature of foreign bodies observed through the gastroscope include one case of phytobezoar, Moersch and Walters 1936; one case phytobezoar, Patterson and Rouse, reported in 1938, included also in this series; one case phytobezoar, Ruffin and Reeves, 1939; one case phytobezoar, Browne and McHardy, reported in 1940.

This paper might well be entitled "One Phase in the Metamorphosis of a Gastroscopist" because, as will no doubt be noted from the following reports, a marked transformation occurs from the uncertainty of the first gastroscopic descriptions of phytobezoar and of the medicated tablets as compared with the more definitely certain opinions as to the character of the foreign bodies and mucosal changes of the later cases. It must be recalled that many opportunities for improvement in our gastroscopic approach have been provided during the interim of two years between the first and last cases of foreign bodies herein reported.

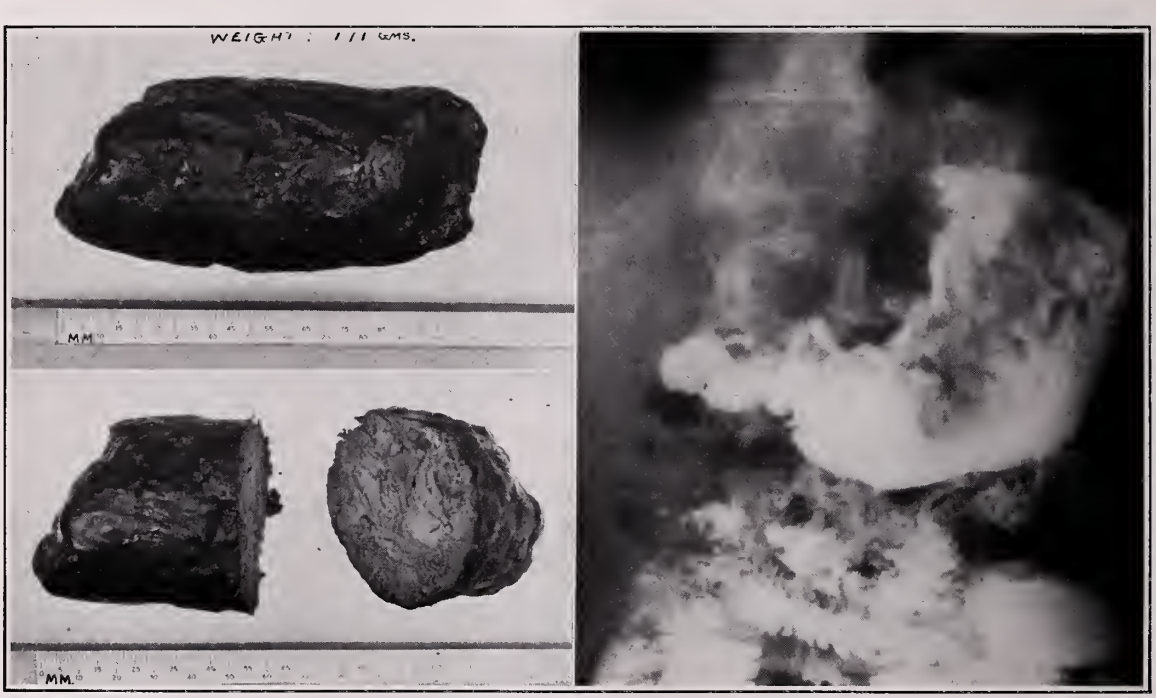

FIG. 1. (Case 1).—Large phytobezoar of the stomach diagnosed gastroscopically and by x-ray in our office May 15, 1938.

CASE REPORTS

CASE 1.—B. F. H., a white man, age 46, a farmer, presented himself at our office May 17, 1938, with the history of recurring pain in the epigastrium since October, 1937. He recalled eating persimmons several times, after which at one time he had a large hematemesis. At the time he came to the office he was experiencing cramping, particularly early in the morning, requiring milk for relief, and an attack of vomiting every two or three days, especially before breakfast, raising large quantities of tenacious mucus.

The patient was of stocky habitus so that physical examination was essentially negative, and laboratory work was negative except for a trace of occult blood in the stool. The gastric acidity was 16° free hydrochloric, and 121° total acidity, with no occult blood.

X-ray studies revealed a large irregular filling defect, occupying the ventral third of the stomach, suggesting a foreign body. Gastroscopic examina-

*From the Department of Gastro-enterology, Baylor University College of Medicine, Dallas, Texas.
*Read before the Section on Medicine and Pediatrics, State Medical Association of Texas, Dallas, May 15, 1940.

tion was done on May 15, 1938, with the following observations: "A tar black prominence occupied the middle and lower half of the upper third of the stomach. Around the margins were small superficial erosions. The appearance was that of a large foreign body such as a phytobezoar, although it could possibly have been neoplasm covered with black hemorrhagic material."

Diagnosis was made of phytobezoar and surgery recommended. On June 3, 1938, at St. Paul's Hospital, a gastrotomy was done, and a phytobezoar weighing 171 Gm. and measuring 105 mm. in length and 50 mm. in diameter was removed, followed by an uneventful recovery.

CASE 2.—J. H. S., a white man, age 22, a farmer, presented himself at Baylor Clinic in May, 1939, with the history that starting December, 1938, he had had epigastric distress, cramping in nature, coming one to three hours after meals, relieved by food. There had been no nausea or vomiting. Physical examination revealed a tender mass in the left epigastrium. Upon questioning, he admitted eating persimmons the past fall. Laboratory work was essentially negative; x-ray study showed a large irregular mass filling over half the volume of the stomach. Gastroscopic examination on May 12, 1939, reported the following: "The gastroscope met no undue resistance, and at once a large tar black mass was seen occupying the greater portion of the stomach. The pylorus and antrum were seen clearly. The mucosa appeared normal in color; there were no ulcerations or changes of gastritic nature. The mass appeared to be very large, occupying fully two-thirds of the stomach."

Surgery was advised, and the stomach was explored at Baylor Hospital on May 30, 1939; a large phytobezoar was removed with the following measurements: length 15 cm., diameter 6 cm., weight 724 Gm. The patient made an uneventful convalescence, leaving the hospital in ten days. Follow-up has shown no further digestive troubles.

CASE 3.—J. E. L., a negro man, age 36, came to Baylor Clinic in January, 1939, with the complaint of knife-life and burning pains in the stomach and in the left back, of three months' duration; with frequent bouts of vomiting; loss of weight of 30 pounds in the past three years; weakness and symptoms of dysphagia.

Physical examination revealed no palpable mass in his stomach. The blood Wassermann reaction was positive, and the total gastric acidity 20°, with free hydrochloric acid absent. X-ray study showed the stomach to be dilated and a practically complete pyloric obstruction, with the contour of the stomach smooth. The x-ray diagnosis was "pyloric obstruction, probably ulcer."

The gastroscopic examination was done with the following report: "Only a small amount of clear, viscid fluid was obtained with the Ewald tube. The gastroscope met no undue resistance and passed to the lowest portion of the stomach. A good view of the pylorus was obtained. However, on the greater curvature were a number of nodular, fairly large-sized black masses, having the appearance of phytobezoars. This possibly could have been old blood covering a tumor but it did not seem at all likely. The remaining portion of the stomach wall failed to show the normal rugae, being edematous, mottled and having somewhat an infiltrated appearance."

Gastroscopic impression was "(1) Phytobezoar of the stomach. (2) Extensive acute, subacute and chronic infiltrative change in the stomach wall agreeable with an extensive gastritis. The pylorus could not be seen. The patient was quite emaciated and weak, although he coöperated well. The examination was not prolonged unduly in an attempt to see the pylorus. (3) A large red ulceration on the

FIG. 2. (Case 2).—Large phytobezoar observed by gastroscopy and x-ray. (X-ray plate shown through the courtesy of Dr. Carlton Wright, Resident in Radiology, Baylor Out Patient Department).

posterior wall in the lower third of the stomach, having the appearance of an acute ulcer."

Surgery was advised and done on January 23, 1939, at Baylor Hospital. There was almost complete obstruction of the pylorus without any palpable evidence of malignancy. When the gastro-enterostomy was done, exploration of the interior of the stomach showed four objects covered with thick, dark, green, bile-stained mucus. Later examination by Dr. Donald Slaughter of the chemistry department revealed the objects were pills of magnesium carbonate. When questioned, the patient admitted taking the pills some six months before. A rather

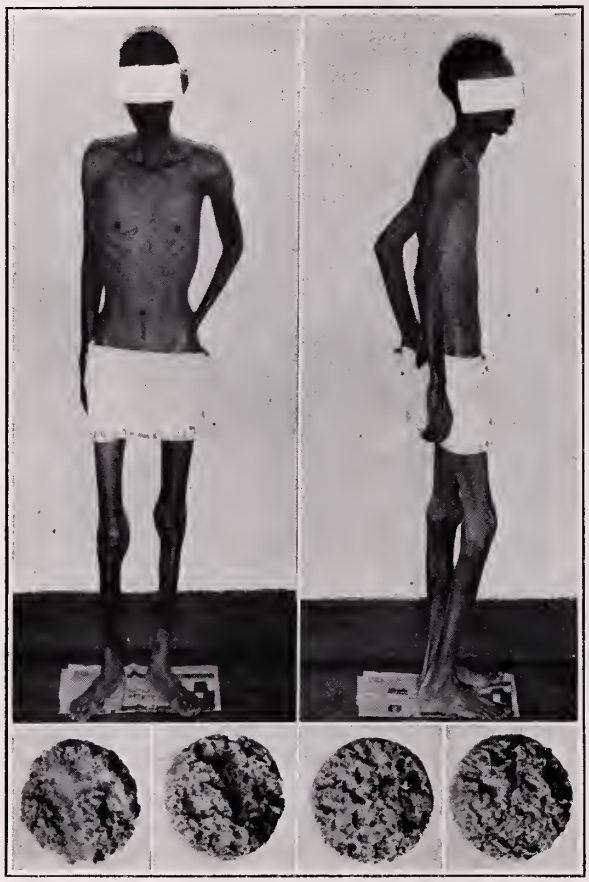

FIG. 3. (Case 3).—Emaciated patient and foreign bodies (medicated pills of a "mail order" variety, taken 6 months before) diagnosed by gastroscopy.

slow convalescence was due probably to marked cachexia.

Another gastroscopic examination was done on June 2, 1939, described as follows: "About one ounce of clear mucoid material was obtained with the Ewald tube. The gastroscope met no undue resistance. The stomach was very spastic and retained the air poorly. A view into the antrum failed to locate an open pylorus so that the pylorus was assumed to be closed. The stoma was observed on the posterior wall about the junction of the middle and lower thirds of the stomach near the greater curvature, standing open, and brown Kirkring folds could be seen for several centimeters into the small bowel. There was no evidence of irritation, ulceration or edema about the stoma. The color of the mucosa was normal. The stomach below this point, especially on the posterior wall, presented edematous folds of mucosa with thick, tenacious mucus filling the spaces between. The greater portion of the rugae were edematous, extending all the way to the cardia. On the anterior wall, in the middle third of the stomach, were some leathery areas where the rugae were absent and numerous superficial depressions were seen filled with an exudate of yellowish-gray character. These areas were irregular in shape and very superficial, not having at all the appearance of punched-out calloused ulcers."

The gastroscopic impression was: "Pylorus closed; gastro-enterostomy stoma, standing open; an edematous, subacute gastritis involving a great portion of the stomach; an area of infiltration with exudate in the mid-portion of the stomach of the anterior wall. There was a marked improvement over the conditions noted a few months ago prior to operation."

CASE 4.—A. W., a negro man, age 25, came to Parkland Clinic September 10, 1939, with a history suggesting peptic ulcer with partial obstruction. X-ray examination showed a large ulcer crater of the preantral lesser curvature and partial pyloric obstruction. The diagnosis was "gastric ulcer, with partial obstruction at the pylorus." The blood Wassermann test was positive. He was admitted to Parkland Hospital and placed on a modified Sippy regime, which included two 10-grain tablets of calcium carbonate every three hours. He continued to vomit and complained of gnawing pain in the epigastrium.

Gastroscopic examination was done two weeks after admission; we were afforded quite a surprise when a large number (twenty-two counted) of practically intact medicated tablets came into view. There was a uniform hyperemia and granular leathery appearance of the mucosa, with absence of normal highlights. Regular peristalsis was observed in the antrum; a portion of the pylorus could be seen and appeared regular. The gastroscopic diagnosis was "Multiple foreign bodies (medicated pills) in stomach; (2) extensive infiltration of the mucosa evidencing gastritis, (?) traumatic or (?) syphilitic; (3) large ulcer lesser curvature appeared benign (?) syphilitic."

The tablets were discontinued. A test meal showed total acidity 30°, with free hydrochloric acid absent. The patient was placed on dilute hydrochloric acid along with antisyphilitic therapy from the Venereal Disease Clinic and gastroscopy was repeated one week later. The only essential difference at this observation was that the large ulcer appeared somewhat improved and the tablets somewhat eroded, smaller and more irregular in size. He was discharged from the hospital without pain or vomiting and has continued his treatment at the Venereal Disease Clinic with further improvement.

CASE 5.—O. E., a white man, age 60, was admitted to Parkland Hospital April 3, 1940, after a large hematemesis. He was in shock and markedly emaciated, so much so that he was unable to be moved for diagnostic study until after repeated transfusions. His chief complaints were pain in the epigastrium for two months, loss of strength for two weeks; tarry stools and vomiting of blood for one week; cramping in the abdomen with chills and fever for two months. On physical examination there was a large tender mass felt in the left epigastrium. The blood count on admission showed: 1,650,000 red cells, hemoglobin 30 per cent, and white cells normal. After two transfusions, the red cell count was 3,100,000, hemoglobin 59 per cent. The sedimentation rate was 37; icterus index test 4.8; free hydrochloric acid 8°; total acidity 68°; blood proteins, albumin 2.7, globulin 1.2, total protein 3.6. Wassermann, Kahn and Kline tests were negative.

The x-ray diagnosis was "Phytobezoar in the stomach with questionable lesion in the mid-portion.

Suspected large ulcerating carcinoma or benign ulceration. Two large gallstones."

The gastroscopic diagnosis was: "(1) large phytobezoar freely movable in the stomach; (2) edema of mucosa about the cardia; otherwise no mucosal lesions were seen." April 24, 1940.

X-ray study on April 26 revealed the following: "Filling defect lesser curvature, changes with a shift in position, giving the appearance of disturbed physiology rather than an intrinsic lesion in the stomach."

Thus with the diagnosis of phytobezoar, and after four transfusions of 500 cc. each, he was submitted to surgery on May 1, 1940, and, according to the resident surgeon, a large phytobezoar was removed from the stomach with some traumatic edema and superficial erosions of the mucosa seen near the cardia. The patient now, two weeks postoperative, has made an uneventful recovery and is taking nourishment by mouth without difficulty.

We have presented here, we believe, the largest reported number of patients in whose stomachs foreign bodies have been observed gastroscopically. All five patients were men. One woman recently seen in our office, having phytobezoar diagnosed by x-ray and proved by surgical removal, was not submitted to gastroscopy because of severe hypertension. The patient in the third case at the first observation had a questionable x-ray filling defect of malignancy not subsubstantiated by further x-ray examination, gastroscopic study and surgical exploration. Malignancy would be unlikely in the presence of phytobezoar, in that the latter requires a liberal or high gastric acidity for its formation. On the other hand, the two patients having foreign bodies of multiple medicated pills had them probably because of low or absent gastric acidity, secondary to a probable syphilitic gastritis. Had sufficient acid been present, the pills would no doubt have dissolved spontaneously in the stomach as they did when submitted to very weak solution of hydrochloric acid in the laboratory after their removal in the first instance and after the institution of acid medication by mouth in the second instance.

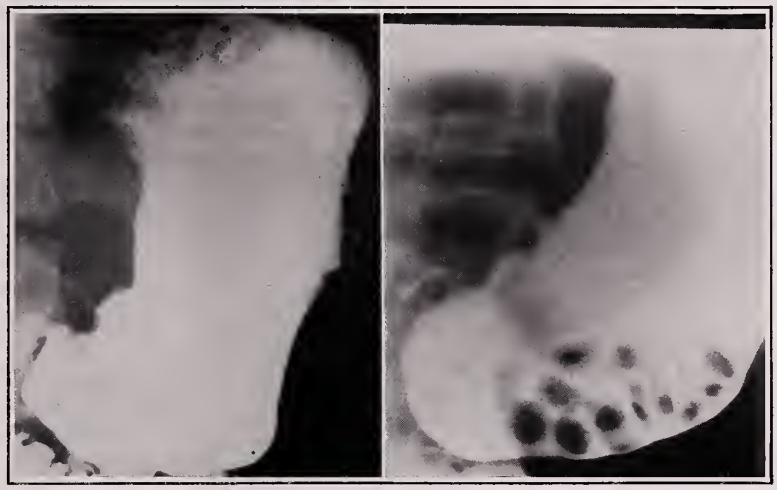

FIG. 4. (Case 4).—Multiple foreign bodies (medicated pills) in the stomach, observed by gastroscopy and x-ray. (X-ray plate shown through the courtesy of Dr. Palmer E. Wigby, Roentgenologist, Parkland Hospital.)

COMMENT

From the very nature of its mechanical construction, the flexible gastroscope can not be used to remove foreign bodies from the stomach, but the instrument permits the direct observation which aids in the identification of foreign bodies and associated gastric lesions. The criteria for the x-ray diagnosis of foreign bodies in the stomach are well known to the trained roentgenologist. The medicated pills in the two cases cited were apparently just as harmful to the stomach mucosa as were the phytobezoars resulting in pain and vomiting. The obstructed pylorus in each instance prevented the passage of the undissolved pills, resulting in trauma to the mucosa by repeated peristaltic attempts at expulsion.

Again we wish to express our most sincere appreciation for the coöperation of members of the medical staffs at Baylor and Parkland hospitals who have made possible to us many opportunities for development of the gastroscopic procedure. Especially are we also grateful to the surgeons who operated upon these patients without a fatality although two of the five patients were practically moribund on admission to the hospital. Again we are grateful indeed for the ever faithful and most efficient coöperation of Dr. Palmer Wigby, roentgenologist at Parkland, and Dr. Charles L. Martin, roentgenologist at Baylor Hospital.

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1108 Medical Arts Bldg.

ABSTRACT OF DISCUSSION

Dr. George M. Underwood, Dallas: I vividly recall my first "observation" of foreign bodies in the stomach, when, as an intern in the Philadelphia General Hospital, in 1917, I chanced to observe an operation on a patient from the Psychopathic Department. This was one of those cases from which several hundred

separate objects—nails, tacks, screws, spoons, and so on—were removed from the stomach. This experience was very impressive. Within the next ten or twelve years, numerous cases were reported throughout the world; there was more or less rivalry as to who might report a case whose stomach contained the greatest number of separate objects. I recall that, in one case, more than 2,500 separate objects were retrieved from the stomach.

No one dreamed in those days, that, in less than twenty years, it would be possible to look into the stomach and observe accurately its interior. Within recent years, several phytobezoars, or food balls, usually persimmon balls, have been reported as observed through the gastroscope. A large gallstone was observed gastroscopically by Ferguson and Calder in late 1939.

Drs. Rouse and Patterson are the first, or among the first, to report the observation through the gastroscope of insoluble antacid tablets. Their observations are extremely interesting, indeed. The symptoms produced by foreign bodies, when present, are usually those of intermittent pyloric obstruction or that of traumatic gastritis. These observations, in my opinion, lend emphasis to the importance of gastroscopic examinations in internal medicine.

Dr. Patterson (closing): We appreciate Dr. Underwood's discussion. We wish to emphasize that in many difficult stomach disorders the gastroscopic study of the stomach mucosa may add tremendously to our information. By this means many underlying diseases of the stomach may be better understood and the therapeutic indications become obvious.

RATIO OF MARRIAGEABLE WOMEN AND MEN DISTURBED BY WAR

"One of the more serious effects of war is the depletion of young men and the disturbance of the ratios of marriageable males and females," *The Journal of the American Medical Association* for May 4 states. "In a recent brief review of this subject in the Statistical Bulletin of the Metropolitan Life Insurance Company it was pointed out that 72 per cent of German military deaths and approximately 55 per cent of the French losses in the last great war were of men under 30. This situation was reflected in the postwar ratios of the two sexes. The French census of 1911 showed substantially the same number of males as females in every five year age group; the 1921 census showed an excess of 261, 206 and 176 females per thousand males in the age groups 25 to 29, 30 to 34 and 35 to 39, respectively. In Germany likewise the prewar census of 1910 showed substantially equal proportions of males and females in each five year group. The 1925 census, however (the first taken by Germany after the war), showed an excess of 150 women per thousand men at ages 25 to 29, 259 per thousand at ages 30 to 34 and 181 per thousand at ages 35 to 39.

"Some of the results, such as the great increase in the proportion of marriages in the postwar period in which the groom was much older than the bride, were quite obvious. Another effect, although perhaps inextricably intertwined with economic factors, was the continued fall in the birth rate after the war. Clearly the actual battle losses are matched by losses in future population due to reductions in the birth rate. Furthermore, the relatively imponderable social effects of a deficiency of men, especially in certain age groups, must profoundly disturb the normal life of nations."

CHORIO-ALLANTOIC MEMBRANE INFECTION AS A DIAGNOSTIC TEST FOR SMALLPOX*

S. W. BOHLS, M. D., and J. V. IRONS, Sc. D.
AUSTIN, TEXAS

Several tests have been devised for the laboratory diagnosis of smallpox. Since smallpox is one of the virus diseases, the application of ordinary bacteriologic and serologic diagnostic methods has been attended with difficulties. Likewise the use of animals has not been very fruitful. Probably the most promising of the serologic methods suggested for the diagnosis of smallpox is that of complement-fixation, but none of these tests has found general acceptance or been widely used. In most localities at present it appears that laboratory tests in the diagnosis of smallpox are not employed. Although typical cases of smallpox are readily recognizable, and are not likely to be confused with chickenpox, nevertheless, it appears that the clinician sometimes would welcome some laboratory help, particularly in dealing with the mild, sporadic case.

In a previous paper we[6] reported that the chorio-allantoic membrane of the fertile hen egg was an excellent culture medium for the virus of smallpox. At this time we are reporting the results of further observations on infections of chorio-allantoic membranes of developing chick embryos and the possible use of smallpox infection in these membranes as a laboratory diagnostic test for smallpox.

COLLECTION OF SPECIMENS

We have found that considerable attention must be given the collection of specimens. An abundance of material collected aseptically at an early stage of the eruption is most likely to constitute a satisfactory specimen. We recommend that lesions which have been broken by scratching or rubbing be avoided, since these lesions are prone to be secondarily infected with staphylococci and other organisms. Likewise pustules about the face are likely to be unsatisfactory.

During the past year we have supplied collection outfits with suggestions regarding their use. It was suggested that in the selected areas several of the unbroken pustules or blisters be carefully cleaned with 70 per cent alcohol and after thorough drying the watery or semi-fluid contents aspirated by means of sterile capillary pipettes. When the patient was near, the pipettes were deposited in a sterile tube containing moist cotton and brought to the laboratory at once; otherwise, it was advised that the specimens be mailed

*From the Laboratories of the Texas State Health Department, Austin, Texas.
*Read before the Section on Clinical Pathology, State Medical Association of Texas, Dallas, May 15, 1940.

in tubes of sterile glycerol. More recently we have advised also the submission of thick, air-dried, films on slides. When these specimens were not obtainable it was suggested that the crusts be submitted in tubes of glycerol.

THE MANIPULATION OF EGGS

Fertile white leghorn eggs were candled and employed at the ninth to fifteenth day of incubation. We found that eleven to thirteen-day-old eggs are most suitable. With only minor modifications we followed the methods which Goodpasture and Buddingh[5] devised for propagation of viruses on the chorio-allantoic membrane of the developing chick. The cover slip method which enables one to inspect the membranes without re-opening the eggs was employed routinely. With a little practice the necessary egg shell cuts can be made with a carborundum pencil but the method is necessarily slow and tedious. A modified dental drill consisting of a reversible motor with foot pedal control and a flexible shaft driving a slip clutch handpiece was found more satisfactory. After a little practice with this instrument the egg shell cuts are quickly and easily made.

INOCULATION OF EGGS

Thick films on slides were resuspended in saline solution and practically cleared by centrifugation. Crusts were rinsed in saline solution to dilute out the glycerol and, following grinding in a sterile mortar, the suspension was subjected to centrifugation and the opalescent supernatant fluid was saved. Since in each instance the object of centrifugation was elimination of bacteria, a fairly high speed was employed for forty-five minutes. It was found advisable that the inocula be ready before the egg membranes were exposed. Excessive exposure of the membranes not only subjects them to the danger of contamination but also permits dehydration and promotes the subsequent appearance of occasional confusing changes of the membrane surface. A varying number of eggs were employed in each test. Inocula were dropped through the shell flap openings on the membrane surfaces. The use of a saline diluent served the purpose of both of retarding excessive dehyration and of spreading the inoculum over the entire membrane surface. To make a window the shell flap was removed and a paraffin base for holding a cover slip was constructed. This operation requires care to avoid excessive bleeding and the formation of ulcers at the site of punctures.

EXPERIMENTAL

Specimens were received from twelve patients on whom a diagnosis of smallpox had been reported. Each patient was said to have suffered typical prodromal symptoms of smallpox. The cases were described as "mild" or "moderate" in severity and, so far as we have learned, all recovered. Specimens were obtained from two cases in which smallpox was suspected and none had been successfully vaccinated. In three instances the specimens were quite unsatisfactory because of late collection, insufficient amount, or gross contamination. In one instance the case was later acknowledged on the basis of contact infections to have been chickenpox. The smallpox virus was cultivated from seven of the remaining ten cases in each of which ample and satisfactory specimens were submitted. Some tabulations are presented in table 1.

TABLE 1.—*Summarized Laboratory Findings on Reported Cases of Smallpox.*

Nature of Specimen and Duration of Infection	Results on the Egg Membranes				
	No. Eggs Tested	Unsatisfactory*	Negative	Positive	Mean No. Pocks Per Membrane
Crusts, 3rd week	12	7	5	0	0
Pustular contents in glycerol and on slide, 2nd week	10	1	0	9	100
Two small crusts, end 3rd week†	6	2	4	0	0
Pustular contents in glycerol, 2nd week	18	14	0	4	25
Pustular contents in glycerol†	12	5	7	0	0
Pustular contents in thick film on slide, 2nd week	8	2	0	6	36
Pustular contents in glycerol and thick film on slide‡	12	5	1	6	50
One pipette not in glycerol†	4	3	1	0	0
Pustular contents in glycerol and on thick slide‡	18	2	2	14	50
Numerous crusts in glycerol, 3rd week	10	2	0	8	25
Numerous crusts in glycerol, 3rd week	8	1	1	6	12
Pustular contents in glycerol	6	1	5	0	0
Pustular contents in glycerol	10	5	5	0	0

*The membranes developed bacterial or fungous infection or embryos failed to live until end of the observation period.
†Classified as an unsatisfactory specimen.
‡Final diagnosis ultimately was obtained only by egg membrane inoculation.

CRITERIA OF INFECTION

The criteria utilized for the identification of changes appearing in chorio-allantoic membranes were: (1) tests for bacterial or fungous infection; (2) the visible characteristics of changes and consistency of their appearance; (3) tests for elementary bodies; (4) histological findings; (5) the result of membrane passages, and (6) the result of animal inoculations.

TESTS FOR BACTERIAL OR FUNGOUS INFECTION

Although developing eggs may offer considerable resistance, bacterial or fungous infections may develop either from the surroundings or from contaminated inocula. With the establishment of bacteria, death of the embryo or chorio-allantoic lesions of varying extent or appearance may result. Rarely, these lesions may simulate those of smallpox, but suitable microscopic or cul-

tural tests invariably permit ready differentiation. For routine purposes swabbing of the surface of an agar slant suffices. The majority of organisms which we have encountered were staphylococci. We have not encountered hemolytic streptococci. The following descriptive data apply to bacteria-free membranes.

DESCRIPTION OF VISIBLE LESIONS OF SMALLPOX

At twelve to eighteen hours after inoculation, except for a slight flush, the membranes were usually quite normal in appearance. At twenty-four hours in a few instances, minute, glistening, pinpoint pocks could be seen. Typically at thirty-six to forty-eight hours some edema was evident but the most striking feature was the appearance of white or gray, scattered, focal, pinpoint to pinhead-sized pocks. The changes were generally quite different from those which we have seen following the inoculation of influenza, vaccinia or herpes viruses and several species of bacteria, yeasts and fungi. By seventy-two hours the pocks tended to be even more definite and larger. In a few instances we have noted the appearance of elongated or atpyical, gray or whitish streaks. In heavy infections the central area tended to be quite edematous and thickened and the lesions were confluent. In these instances at the periphery one could frequently count the rounded, sharply defined and individualized pocks, presenting in miniature a picture of smallpox. Subsequently, the lesions tended to form creamy areas of pustulation and these infections generally failed to cause death of embryonic chicks.

MICROSCOPIC FINDINGS

Histologically we found well-defined foci of cellular proliferation, inflammation and necrosis. These foci of proliferation were the visible pocks. While all three embryonic layers were involved the ectoderm was principally attacked. The cells were found to be hypertrophied and by seventy-two hours there was much evidence of "ballooning degeneration." Where necrotic changes had not progressed too far, intracytoplasmic inclusion bodies were seen in many of the ectodermal epithelial cells. These structures were acidophilic, varied in size and undoubtedly were the classical Guarnieri bodies. These structures were not seen in mesodermal and entodermal cells. The mesoderm was seen to be edematous in the involved areas and, as the lesions progressed, contained an increasing number of inflammatory cells which tended to wander among the ectodermal cells, eventually replacing them. Local areas of proliferation were frequently seen in the entoderm.

In carefully prepared films from membranal lesions which were stained by the Morosow[6] method, the elementary bodies could be demonstrated. Many preparations from smallpox-infected membranes have been made and have been compared both with preparations from vaccinial-infected membranes and uninfected controls. The elementary bodies were never quite as numerous in smallpox preparations as in vaccine preparations. In employing the Morosow stain, unless very careful attention is given technical details, the preparations are likely to be ruined by precipitated reagents.

MEMBRANE PASSAGE OF SMALLPOX VIRUS

From table 1 it is clear that the mean number of pocks per infected membrane was sometimes small and in any event it was desirable to learn something of the behavior of the several isolates in successive membrane passage. Prior to removal of portions of a membrane for further study, the entire top of the egg shell including the observation window was removed aseptically. Membranes were tested for sterility and stored in sterile dishes in the cold room. For serial passage small pools of membranes were triturated in physiological saline solution with mortar and pestle; 0.25 cc. of the crude sediment, omitting large lumps of tissue, constituted the routine inoculum. Four or five eggs were employed at each transfer. Each isolate could apparently be maintained indefinitely and seemed to retain its original characteristics but the size and number of pocks showed considerable variation.

ATTEMPTS TO INFECT LABORATORY ANIMALS WITH SMALLPOX VIRUS

It is not our purpose to evaluate the literature on experimental infections in small laboratory animals. We have attempted on several occasions both with passaged virus and with original material to infect the skin of the rabbit. Except for a slight redness and possible faint thickening along the lines of scarification the results have indicated failure. With rabbit skin transfers the reactions have been even less definite. With the two isolates which we have tested, entirely negative results have attended scarification of the skin of guinea pigs and mice. We have not explored other routes of inoculation.

ATTEMPTS TO CULTURE THE CHICKENPOX VIRUS

The results obtained in attempted egg membrane culture with lesions from clinical cases of chickenpox were in sharp contrast with the findings in reported cases of smallpox. In addition to the studies we[6] have previously reported, we have tested materials

from several other cases, making twenty-six tests in all on twenty-one typical cases of chickenpox. We, ourselves, collected most of the specimens by aspirating the contents of watery blisters which were dropped on membranes, several blisters being utilized in each test. Crusts suspended in glycerol have been mailed us on a few occasions. Invariably tests with chickenpox materials have failed to elicit the formation of detectable pocks or blisters on the egg membranes. We have observed several membranes for periods up to seven or eight days, postulating that reactions might be more delayed than those of smallpox. We have particularly searched for cases in adults, theorizing that these strains might be most virulent. Attempts at membrane passages, on the assumption that initial feeble reactions might be overlooked, have also given entirely negative results. It was also noteworthy that elementary bodies were not found in membranes inoculated with chickenpox test materials. In view of consistent failure to demonstrate visible lesions, histological studies have not been especially emphasized.

ATTEMPTS TO CULTURE THE HERPES VIRUS

It was of some interest to observe the reaction of the herpes virus in the chick membrane. Dawson[4] first described the development of the herpes lesion in the chick membrane. We have succeeded in three of four attempts in isolating and passaging herpes virus obtained from two individuals. These isolates have behaved much alike but one could determine by daily observation that the lesions visibly developed somewhat differently from those of smallpox. The pocks tended not to become as large as those of smallpox, appeared to be more superficial, failed to form typical creamy areas of pustulation and were short-lived. The edema so conspicuous in heavily infected smallpox membranes was less marked in herpetic membranes. Intranuclear changes associated with herpes were also demonstrable.

DISCUSSION

We have described the visible bacteria-free lesions which occurred in chorio-allantoic membranes of fertile hen eggs following introduction of the pustular contents or crusts obtained from clinical cases of smallpox. These lesions expressed themselves as typical, discrete, white or grayish, individualized pocks simulating a case of smallpox in miniature form. Pustulation not unlike that of smallpox occurred. The evolution of the lesions was sufficiently uniform and characteristic to be of considerable diagnostic significance, in our opinion. The lesions were readily reproducible in serial passage in the absence of any demonstrable agent other than the smallpox virus. Moderate numbers of elementary bodies were demonstrable in carefully prepared films. In case any doubt arose concerning the specificity of findings, the lesions were available for histological examination. Guarnieri bodies were demonstrable except where necrotic changes had progressed too far.

We have not, as yet, concerned ourselves with the problem of determining if the cases from which our materials were obtained were in reality alastrim rather than smallpox, if, indeed, any deep-seated biological differences between alastrim and smallpox exist. At present we prefer to consider that we were dealing with cases of true smallpox. In one community where two of the cases which were studied occurred, we believe the evidence justified the conclusion that smallpox had been occurring for quite some time. It had, however, been erroneously considered as chickenpox, and as a result of rapid passage in a large group of susceptibles had quite possibly gained in virulence.

We have emphasized the necessity of giving attention to the time and manner of collecting specimens. While it is possible that some strains of smallpox are unable to effect lesions in fertile eggs under the conditions of our study, since we were not uniformly successful with all suspected materials which we obtained, we suspect that had ample material been collected aseptically and at earlier dates these failures possibly would not have been recorded. While we have been able to distinguish herpes lesions from those of smallpox in membrane cultures with considerable success the possible confusion which might arise suggests the need for avoiding possible herpetic lesions at characteristic sites in susceptible subjects in the collection of specimens for smallpox study.

In contrast with the results obtained in smallpox, the inoculation of vesicular fluid or crusts from cases of chickenpox gave essentially negative results. Of several specimens studied, in each instance we were unable to detect visible lesions within periods from one to several days after inoculation. We also failed to find specific changes by microscopic study of forty-eight to seventy-two-hour inoculated membranes. Our findings supported those of Burnet and Lush[2] and Buddingh,[1] who also failed to find lesions of the chorio-allantoic membrane of the developing chick embryo following the inoculation of materials from clinical cases of chickenpox.

We believe that the method of chorio-allantoic membrane culture is worthy of further study and might well be compared with

other tests to determine its possible value as a diagnostic test for smallpox and as a possible aid for exclusion of smallpox in the differential diagnosis of chickenpox and other conditions which may present difficulties of diagnosis.

SUMMARY

1. The chorio-allantoic membranes of the developing chick has been utilized for reproduction of smallpox lesions in an environment free from bacteria and fungi. Characteristic pocks developed in thirty-six to seventy-two hours. Microscopic findings were characteristic of smallpox.

2. The manner of collecting specimens has been stressed. The differentiation of lesions likely to be confused with those of smallpox has been considered. Attempts at reproduction of chickenpox lesions resulted in consistent failure.

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412 E. Fifth Street.

ABSTRACT OF DISCUSSION

Dr. Jarret E. Williams, Galveston: The procedure described and discussed by Dr. Bohls and Dr. Irons appears to be a valuable contribution to laboratory medicine. The embryonic membranes of the chick have served well as experimental material for viruses and for the preparation of improved vaccines of viruses and more recently of rickettsiae. And now the material appears to be easily adapted for use in diagnostic tests for viruses and possibly for other infectious agents.

The criterion of this test—infection or no infection—is quite definite with a positive reaction. With further use of the test, or possibly with another test positive for varicella to run concurrently, the negative reaction might be equally significant. In any event, the necessity of adequate and satisfactory material, as for most laboratory tests, cannot be overemphasized.

A further point of interest which may be inferred from the authors' discussion is the importance of considering the evidence from both clinical observation and laboratory tests together. Although the colonies of smallpox virus can usually be easily differentiated from other viruses, as herpes, on the embryonic membranes it is possible for doubtful conditions to arise. The development of a valuable diagnostic test is therefore no excuse for relaxing the acuity of clinical observation. Nor should it lead to relaxation of efforts toward universally required vaccination against smallpox.

Although Texas has fared better than some other states (*e. g.* Montana) in the recent increase in the incidence of smallpox, we must not forget our strategic position in the prevention of this disease by virtue of (1) our residual indigenous cases, and (2) the hazard of imported cases. And as diagnosis is always an important prerequisite in the control of any disease, I think the staff of our State Health Laboratories deserve to be complimented on their efforts and results in developing this laboratory test for the diagnosis of smallpox.

THE STATE RESERVOIR OF MALARIA THERAPY*

DAVID H. LAWRENCE, M. D.† and J. E. SORELL‡
AUSTIN, TEXAS

Much has been written in regard to use of various types of heat in the treatment of the psychoses. It is not the purpose of this paper to enter into a discussion of the advantages or disadvantages of any type of heat or to delve into the history, manifestations, and treatment of the different psychoses. This paper is designed to give the profession the minute details, step by step, of malaria therapy as it has been developed at the Austin State Hospital and the State Department of Health, and the steps of the technique of the mosquito inoculation.

Since the advent of malaria therapy, it has been a debatable question of whether mosquitoes or direct blood inoculations should be used. There are many points of individual merit to each of these factors. Our work deals only with the mosquito as the inoculation agent because our interest is only in developing and preserving a reservoir of malaria plasmodia in their highest and most perfect form for scientific research purposes—the therapy aspect belongs to the Austin State Hospital and the private practicing physicians.

We feel that malaria therapy is a well established, recognized, and an accepted agent that may be used by competent legally practicing physicians as a remedy for several common disease conditions of mankind; however, since the malaria is communicable, a public health problem is created wherever and whenever the artificial use of it is evidenced. Our vigilance in this connection is of particular interest during the mosquito season and in such places where Anopheline mosquitoes are known to be present.

The State Health Officer, Dr. George W. Cox, wishes it to be known generally that the Texas State Department of Health feels it is an honor and a privilege to coöperate with the State eleemosynary institutions in making it possible for the Austin State Hos-

*Read before the Section on Public Health, State Medical Association of Texas, Dallas, May 14, 1940.

†Physician, Austin State Hospital, Austin, Texas.
‡Malariologist, Texas State Department of Health, Austin, Texas.

pital to render this selective service to the medical profession of Texas, and also to announce publicly that every physician who has used this service to date has given the State Department of Health his fullest cooperation in carrying out every health rule and safety measure recommended by his Department; for this Dr. Cox is indeed very grateful. Dr. Lawrence will discuss the reservoir of the mosquito inoculation and the sending of malaria parasitized blood to the private practicing physicians—a service handled exclusively by the Austin State Hospital.

Due to lack of time, it is thought best at this session to limit the showing of this series of pictures containing about 100 slides in technicolor, to the pictures on the technique of rearing and handling mosquitoes in the Laboratory, so that Dr. Lawrence may have more time to discuss the care of the patient during the use of malaria. However, we will show the entire series in the Scientific Exhibit at this Annual Session, at which time all details will be thoroughly covered. The group we will show here includes the method of infection of the mosquitoes by the patient, and the infection of the next patient by the mosquitoes. We will also show the details of the mosquito insectary, including malaria microscopy and other laboratory procedures, and the specially built, air-conditioned rooms and special equipment found necessary in the handling of large groups of infected mosquitoes. We also wish to emphasize the finding, developing, and isolation of a special and specific strain of benign tertian malaria which has been in use in the Austin State Hospital and the malaria investigations laboratories of the State Department of Health for more than one year. We have positive proof that this strain of benign tertian malaria produces higher fever with less toxicity and more monocytes than other strains with which we have come in contact. The latter factor we think is very important in this form of therapy.

FIG. 1.—Section of mosquito insectary showing early stages of development of the mosquitoes.

Larvae are obtained from their natural surroundings so that they may be raised into uninfected adults for use in the laboratory.

Adult mosquitoes are collected out in nature, through the use of a catching cage, which consists of a cage with a mouth through which a test tube may be fitted. The captured mosquitoes are then brought into our laboratory and given a blood meal on a rabbit. This insures the laying of a larger num-

ber of fertile eggs. Mosquitoes do not require blood to live but the females require it to lay fertile eggs. These mosquitoes are then placed on a nest which consists of a pan full of water. The mosquitoes lay their eggs and are then refed so that they may develop more eggs and are again placed on the nest for egg laying.

Mosquito eggs usually hatch in from two to five days, depending upon the temperature, although at temperatures slightly above freezing they have been kept twenty days before hatching. After hatching, the larvae are placed in pans which contain an infusion

Fig. 2.—Freshly hatched sterile Anopheles quadrimaculatus mosquitoes (one day old) ready for malaria infection.

heavy with microscopic animal life. The larvae feed on these small animals and develop and grow. At the end of larval growth, which is generally about twelve days, but depends greatly on temperature and food supply, the larvae pass into a resting stage, which is known as the pupa stage. The time which they remain in the pupa or resting stage is controlled by temperature also, but it is generally two days. The pupae are put in cups where they remain until the adult mosquitoes emerge. Lantern globes are placed over these cups so that the mosquitoes, upon emerging, are caught and may be easily handled. Thus we see in general the routine followed to obtain sterile mosquitoes.

Small bobbinet cages are then used to hold the mosquitoes during their use in the laboratories.

The mosquitoes are next released in a transfer cage and each mosquito is caught and inspected for flaws. Only perfect mosquitoes are used for therapy work; all others are put back in our breeding stock.

The mosquitoes are then kept in an air-conditioned room which contains two air conditioning units, controlled by thermostat, to maintain a constant 70° temperature. Two machines are used to insure against accidents to one machine.

In the next steps the mosquitoes are allowed to feed upon a malaria positive patient, thus infecting the mosquitoes, which requires a twenty-day incubation period, during which time they live on sugar water and distilled water. During this incubation period, cages become soiled so that the mosquitoes must be transferred. This is done inside of the transfer cage by means of a transfer tube, which is a glass tube with an automatic closing device, fastened on the end of a pair of forceps.

The time of incubation period is determined by dissection and examination of the mosquito's stomach and salivary glands.

After the mosquitoes have become gland-positive they are kept in an ice box at 44° F. This is to preserve the malaria parasites in the mosquito glands, for every time the mosquito bites she secretes salivary juice carrying with it sporozoites. At 44° F., mosquitoes lie dormant and do not bite, thus saving their sporozoites until ready to take them out of the icebox to warm up and use them to infect the next patient.

It has been our experience that a study of the blood readings and a careful following of the course of development of the malaria plasmodia in the patient aids greatly in determining the patient's resistance. While the Wassermann, Kahn, and Eagle tests are routinely made on all patients, considerably more attention is paid to the change in spinal fluid measures by the colloidal gold curve.

We have shown so far the general procedure in handling and infecting the mosquitoes in the maintenance of the malaria reservoir. Next were shown pictures of the actual infection and care of patients at the Austin State Hospital, which were described and discussed by Dr. David Lawrence.

The study of malaria therapy has been carried on for the past twelve years, and 302 cases have been treated, composed of the following disease conditions: general paralysis of the insane, 240; juvenile paresis, three; tabes dorsalis, three; somatic syphilis, fourteen; dementia praecox, twenty-five, and manic depressive psychosis, seventeen.

In this study no patient above 60 years of age has been inoculated for obvious reasons

and no small children, the youngest having been 14 years of age.

Patients suffering with anemia are treated for this condition prior to inoculation as this condition is the most common complication of acute malaria.

INOCULATION OF PATIENTS

A great many patients who have been treated with arsenic or bismuth salts or both, come to us for malaria inoculation. It will be recalled that both of these drugs are antimalarial agents and will prevent a successful inoculation if present in the body. Therefore, a sufficient period of time should elapse for them to be entirely eliminated before any efforts at inoculation are undertaken.

We have found by experience that soluble salts of bismuth are eliminated in from two to four weeks; however, the arsenicals are more slowly gotten rid of, due to the fact that some of the arsenic is stored in the liver, and a period of time of from sixty to ninety days must elapse before the arsenic is entirely eliminated.

INCUBATION

The period of incubation resulting from mosquito inoculation varies from twelve to fifteen days and eight to twelve days from parasitized blood inoculation. The first paroxysm is usually ushered in by fever and no chill; after this the patient suffers the three phases of a paroxysm, *i. e.*, chill, fever and sweat. These occur each day, in as much as our strain of malarial parasites has become quotidian in character.

HOSPITAL CARE OF ACUTE MALARIA

On the advent of the first paroxysm the patient is transferred to a hospital, which is double screened against mosquitoes. A complete blood count and hemoglobin estimation, with parasite count, are made daily. The blood pressure is taken daily and usually the systolic and diastolic pressure goes down; however, the maintenance of the pulse pressure is the important factor and may be sustained by the use of digitalis in the event that it becomes necessary.

FIG. 3.—Infected Anopheles quadrimaculatus mosquitoes going through the twenty-day incubation period.

Anemia is the most common complication and only twelve of our patients suffered with this condition. We attempt to avert this by the liberal use of liver extract, beginning its daily dose at the onset of activity of the malaria.

Myocarditis.—Many of these patients were suffering with myocarditis and aortitis of syphilitic origin and malaria often produces a myocarditis. To minimize the danger of the condition, digitalis is given by mouth three times each day from the date of onset of the malaria.

Enlargement of the spleen occurred in only four cases. The spleen became about the size of a small orange and did not require treatment, and the malaria was not terminated on this account.

The gastritis was benefited by the use of phenobarbital.

The one case of nephritis and the one case of jaundice were of a mild nature and required no treatment.

Alkalies are given three times a day to keep up the blood level of alkalinity as the plasmodia develop best in alkaline media.

Sodium chloride is lost in the sweat; hence this level must be kept up by the use of 15 grains of sodium chloride daily.

FIG. 4.—Gland positive mosquitoes are kept at a temperature of 45° F. in the ice box ready for malaria transmission.

FIG. 5.—Infecting the patient with the gland positive mosquitoes.

A regular diet is given with ample liquids, such as milk, malted milk, fruit juices and water.

Routinely the temperature is taken every three hours until the paroxysms ensue, then every fifteen minutes until the sustained peak is passed, and when on the decline each hour until normal.

Parasitized blood is shipped in citrated glucose solution to prevent clotting and is chilled before and during transit.

Should an emergency arise and it is deemed expedient, quinine dihydrochloride in 10 grain doses is given in the vein every three hours until three or four doses are given, followed by quinine sulphate grains 5 orally, four times a day.

In non-emergency cases 5 grains of quinine sulphate is given orally four times a day for four days, followed by 5 grains of quinine sulphate twice per day to complete thirty days of quinine medication.

Atabrin and plasmochin have been used but we found no advantage over quinine and were mindful of the possible danger to the liver.

Of the 302 cases of malaria, one patient died of this disease, due to a lack of adequate nursing supervision.

COMPLICATIONS

Much has been written even in the text books regarding the serious complications incident to malaria. Such has not been our experience in this study, and we presume that the references made had to do with the chronic and untreated cases of this disease.

Our experience has been very gratifying, due to the fact that very close clinical and nursing supervision has been maintained at all times. The following complications and the number of patients have been observed: anemia, twelve patients; acute myocarditis, nine patients; enlarged spleen, four patients; acute gastritis, two patients; hepatic jaundice, one patient.

CONCLUSIONS

In our opinion malaria is the best and safest type of hyperpyrexia, and we believe that mosquito inoculation is the safest and thus the best form of transmission.

The phagocytosis of malaria is highly beneficial in the treatment of neurosyphilis. This has been exhibited by the fact that equally good results have been obtained in cases in which the temperature reached only 103° F. as in those in which the temperature rose to 108° F.

One nurse may take care of six to eight patients at one time.

The patients are much more comfortable, in that they may remain in their night clothing in a room, cooled by fans, and ample cold water and other fluids are given.

The death rate under adequate clinical and nursing supervision is the lowest of any of the satisfactory types of fever—in our series 0.33 per cent.

SOCIALIZED MEDICINE — A MENACE TO PUBLIC HEALTH*

J. HERBERT PAGE, M. D.
HOUSTON, TEXAS

We have heard much in recent months regarding proposed State legislation affecting the health of the people and the forms and methods of delivering professional services to those who are sick or intelligent enough to seek advice on how to avoid sickness.

We should at least be acquainted with the joint resolution introduced in the United States Senate, which bill, if adopted, would require every licensed physician to answer all calls from the needy and to render necessary care under penalty of a fine of $1,000 or three months in jail, or both. After the service has been rendered the physician may send his bill to the proper governmental agency, which may pay it if all rules and regulations have been conformed with. Hospitals likewise must admit all indigent patients brought to them.

No doubt, this resolution was introduced as a trial balloon, not with the hope in mind of actually procuring good medical service at the point of "the bayonet," but for the purpose of advancing the now clearly exposed governmental policy of regimenting our people into some modification of the various European totalitarian forms of government.

Such a policy, of giving the State control over everything, can be accomplished only by a comparatively slow process, that is, a step at a time controlling banking, industry, agriculture, and employment. The process of such accomplishment includes the utterance over the radio and through the press of fine-sounding phrases and soft words which skillfully conceal "the bayonet" and lull into a sense of false security the rank and file of the American people.

If our people are thus deceived about the quality of the sickness service which they may receive in the future under governmental forms of medical practice submerging and replacing private practice, the rank and file of the membership of our county medical societies will be largely to blame. Frequent endeavors have been made to place the responsibility on all physicians to carry on continuously the education of people against socialized and bureaucratic forms of medical practice.

How does socialized medicine work? I know of a man who made a personal investigation of it in England. He visited a panel doctor, as they are called, a doctor paid by the State who has 100 or 200 families under his care. After lunch the doctor invited him into his office. There were twenty-one patients there.

"How many of you have a cough?" asked the doctor. Seven said they had.

"How long have you had it?" the first patient was asked. "About a week."

"Then take this, a teaspoonful every hour," said the doctor as he handed him a bottle. The other six also were given a bottle each.

"How many of you have rheumatism?" Another group stepped out and after a question or two were given medicine.

The doctor took care of all twenty-one patients in about an hour . . . and that's the way socialized medicine works. No such doctor has any great interest in his patients and no interest in research and study, which would advance medical science.

To have socialized medicine in this country it is estimated about 5 per cent of every man's wages would have to be taken out of his pay envelope. That would mean about $100,000,000 a year.

Someone asked Senator Wagner: "Do you realize it would cost our own state of New York about $67,000,000 a year, and we are having trouble balancing the budget now?"

"We could get it," the Senator said.

"We doctors would rather starve than to lose our liberty of action, and yours, and to see our profession brought down to a sordid level where somebody in Washington will tell us what patients we must serve and how. We, like you, prefer to be masters in our own house."

A former president of the Colorado Hospital Association, Dr. Herbert A. Black, of Pueblo, became so aroused by the danger of the socialization of American hospitals that he said some months ago . . .

"Friends, associates, and co-workers in the hospital field . . . where today are we headed? I speak not as a theorist or a dreamer," he added, "but merely as one who has enjoyed many years of actual experience in dealing with the practice of medicine, and the management of hospitals, and who now views with concern certain existing conditions."

There is today no call for a fundamentally radical change in this humanitarian service.

*Read before the Section on Public Health, State Medical Association of Texas, Dallas, May 14, 1940.

It comes chiefly from a coterie comprised of out-and-out politicians and misguided though sincere social conscious persons who used a survey that didn't survey, and a National Health Program emanating from a self-sponsored and self-serving conference that did not confer.

We are told there must be more hospital facilities. Why? Because that "survey" found many counties in the United States without hospitals. Here in Texas there are counties without hospitals—the majority of whose inhabitants live nearer to excellent hospitals in adjacent counties than do many persons resident in those counties supplied with creditable hospital facilities. I am reliably informed that comparable conditions exist rather generally throughout the United States. True, the building of thousands of small hospitals throughout the country would for a time supply work for the unemployed, but, more important, it would supply another governmental bureau, which, if functioning true to form, would be staffed with political henchmen. Not for the voluntary hospitals alone, but for the physical, moral, and spiritual rights of humanity, should we realize the threat of socialized medicine and be alive to challenge these misguided zealots. As a tiny insect can eat away the pillars of a mighty temple, so may certain unholy influences destroy a kingdom or a profession.

Harmony is more to be sought than discord, and peace is more desirable than war, but if harmony and peace are denied, then we must employ every weapon at our command to combat the situation today.

A number of those who lack adequate medical care, it is suggested, also lack adequate anything; the real solution would be a living wage for everybody employable, not state medicine.

Medical care consists of many things beside medical advice and medicine. The achievement of public health involves factors besides medical science; the attack must be made upon a broader front. "Adequate" medical care assumes a public that understands it, wants it, and is capable of receiving it. The present extent of quackery and the present wide use of nostrums emphasize the fact that a better educated public is a condition precedent to any nationwide plan for making adequate medical care generally available.

There is wide agreement on the soundness of the principle that the individual should pay in some manner, in accordance with his capacity to pay, and that there is need for establishing indigence by just and generous means and with no implication of delinquency, and of determining degrees of capacity to pay.

It is admitted that the "art of medicine" has frequently been exploited at the expense of the science, and that the doctor-patient relation ought certainly not to be made to serve as a substitute for diagnosis; but there is also the view that after the doctor-patient relation has been stripped of purely sentimental values, genuine therapeutic values remain.

No program of reform will succeed that is based wholly on economic considerations. Social economists in the past, in dealing with the subject of medical care, have perhaps been more concerned with the cost and distribution of medical service than with the quality and the character of the care itself. Medical care is neither a commodity nor a constant, and any distributive schemes that so assume are destined to fail. Very generally the view is expressed that the best service can be rendered to those in need of medical care is first of all to improve the quality of medical care and the personnel of the profession. How ever the problem may be defined, it cannot be defined as making mediocre medical care available to a greater number of people. Better medicine, say the doctors, is more important than better distribution and lower costs and will do more for the public health.

One of the points of greatest interest discussed is the relation, both traditional and potential, between the public health organization and the private practice of medicine. There is a great deal of stress on the point that the time has gone by when the public health officer deals with the prevention and the private practitioner with cure. Disease control and the health of the people follow no such sharp alignments of function and responsibility. There are sources of coöperation between public health authorities and private practitioners, where coöperation has been achieved, and the causes of antagonism where opposition has characterized the relation of these two groups are cited. There is more than a little reference to a medical practice of the future when "preventive medicine" will be as largely practiced in the physician's office as the in public health department. This presages the growing importance of working out the true relation between the private practitioner and the public health officer.

The views in favor of state medicine in this sense rest on the premise that there can be no real distinction between public health and private health; that abuses in the present system such as fee splitting can be remedied only by state medicine; that state medi-

cine, whether or not desirable, is coming.

The views opposing state medicine object to socializing medicine in an otherwise capitalistic system; express fear of political control; express distrust of governmental efficiency; fear jeopardizing research and destruction of the doctor-patient relation.

The medical profession looks hopefully toward an eventual merging of preventive and curative medicine, and regards insistence on separating them as reactionary and stupid. We believe that preventive medicine will more and more be practiced in the doctor's office, and that it will some day be generally recognized that the resources of medical science and the energies of the doctor are properly to be devoted to the prevention as well as to the cure of the disease. The better health of the race becomes the objective.

Year after year additional disease is considered to be "endowed with a public interest" involving governmental functioning. The list steadily increases: tuberculosis, cancer, pneumonia, syphilis, have already admitted "public" status; and there are, in various states, proposals for including diseases of the heart and circulatory system, arthritis and other diseases which have been shown to be a large factor in disability among the population and which require a treatment too long and too expensive to be within the financial compass of most citizens.

Attempts at venereal disease control come in for special comment and the need of cooperation between public health authorities and private practitioners is illustrated by reference to the methods required for detecting, diagnosing and treating this disease—and the impossibility of sharply separating the preventive and the curative functions in this case.

Regimentation, standardization, *et al.*, is the revered juggernaut before and beneath which all true Americanism must be crushed. The real and growing presence of state medicine has been the subject of editorial comment here and there, while the anxious skippers of many medical societies have been apprehensively scanning the horizon for the battle fleets of state medicine.

There are many attacks we have been too proud or too preoccupied to take account. They are, of course, the precedents and polities of medical welfare administration, local, state, and national.

Senator Burke, I think of Kansas, said recently, "One of the noblest of all professions is now on trial and fighting for its life. Upon its life and continued, unhampered freedom depends the physical welfare of this great nation."

1215 Walker.

MISCELLANEOUS

COMING MEETINGS AND CLINICS

State Medical Association of Texas, Fort Worth, May 12-15, 1941. Dr. Preston Hunt, Texarkana, President; Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth, Secretary.

American Medical Association, Cleveland, 1941. Dr. Nathan B. Van Etten, New York, President; Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Southern Medical Association, Louisville, Kentucky, November 12-15, 1940. Dr. Arthur T. McCormack, Louisville, Kentucky, President; C. P. Loranz, Empire Building, Birmingham, Alabama, Secretary-Manager.

Texas Allergy Association, Fort Worth, May 12, 1941. Dr. Boen Swinny, Medical Arts Building, San Antonio, President; Dr. Homer Prince, Medical Arts Building, Houston, Secretary.

Texas Ophthalmological and Otolaryngological Society, Fort Worth, December, 1940. Dr. J. W. Ward, Greenville, President; Dr. Dan Brannin, Medieal Arts Building, Dallas, Secretary.

Texas Radiological Society, Sherman, January 18, 1941. Dr. Jerome H. Smith, San Angelo, President; Dr. L. W. Baird, Temple, Secretary.

Texas Club of Internists, Boston, October, 1940. Dr. Carl Lovelace, Waco, President; Dr. George Herrmann, Medical College, Galveston, Secretary.

Texas Association of Obstetricians and Gynecologists. Marlin, Oct. 5, 1940. Dr. H. Reid Robinson, Galveston, President; Dr. Julius McIver, 1314 Medical Arts Building, Dallas, Secretary.

Texas Pediatric Society, Galveston, Oct. 5, 1940. Dr. T. A. Tumbleson, Beaumont, President; Dr. Frank Lancaster, 4409 Fannin Street, Houston, Secretary.

Texas Neurological Society. Dr. Wilmer Allison, Fort Worth, President; Dr. Melbourne J. Cooper, Nix Professional Building, San Antonio, Secretary.

Texas Railway and Traumatic Surgical Association, Fort Worth, May 12, 1941. Dr. G. V. Brindley, Temple, President; Dr. Ross Trigg, First National Bank Building, Fort Worth, Secretary.

Texas State Pathological Society. Dr. Geo. T. Caldwell, Dallas, President; Dr. M. D. Bell, 1109 Medical Arts Building, Dallas, Secretary.

Texas State Heart Association, Fort Worth, May 12, 1941. Dr. Joseph Kopecky, San Antonio, President; Dr. V. E. Schulze, San Angelo, Secretary.

Texas Dermatological Society. Dr. W. A. Smith, Beaumont, President; Dr. Dunean O. Poth, 1230 Nix Professional Building, San Antonio, Seeretary.

Texas Surgical Society, Houston, Oct. 7-8. Dr. Everett Jones, Wichita Falls, President; Dr. Walter Stuck, 1426 Nix Professional Building, San Antonio, Secretary.

Texas Orthopedic Society, Fort Worth, May 12, 1941. Dr. W. B. Carrell, Dallas, President; Dr. Ruth Jackson, Medical Arts Building, Dallas, Secretary.

Texas Association of Medical Anesthetists, Fort Worth, May 12, 1941. Dr. Thomas H. Compere, Houston, President; Dr. R. A. Miller, 1415 Nix Professional Building, San Antonio, Secretary.

Texas Society of Gastro-enterologists and Proctologists, Fort Worth, May 12, 1941. Dr. M. O. Rouse, Dallas, President; Dr. Tom E. Smith, 1207 Medieal Arts Building, Dallas, Secretary.

Texas Mental Hygiene Association. Dr. Paul White, Austin, President; Dr. Evelyn M. Carrington, Huntsville, Secretary.

Texas Tuberculosis Association. Dr. E. G. Faber, Tyler, President; J. W. Butler, Galveston, Secretary.

Texas Public Health Association, Fort Worth. Oct. 7-9, 1940. Dr. J. W. E. H. Beck, De Kalb, President; Mr. P. A. Kerby, State Department of Health, Austin, Secretary.

Second District Medical Soeiety. Dr. W. V. Ramsey, Abilene, President; Dr. W. T. Sadler, Merkel, Secretary.

Third, Panhandle, District Medical Society, Lubbock, Oct. 8-9, 1940. Dr. F. A. White, Childress, President; Dr. H. H. Latson, 301 Polk St., Amarillo, Secretary.

Fourth District Medical Society, Ballinger, Oct., 1940. Dr. J. P. Anderson, Brady, President; Dr. O. H. Chandler, Ballinger, Secretary.

Fifth and Sixth, Southwest District Society, Laredo, 1941. Dr. T. E. Christian, San Antonio, President; Dr. W. W. Bondurant, Jr., 1512 Nix Professional Building, San Antonio, Secretary.

Seventh, Austin District. Dr. Joe A. Shepperd, Burnet, President; Dr. A. L. Nanny, Marble Falls, Secretary.

Eighth, Ninth and Tenth District Medical Society, Houston, 1940. Dr. Walter D. Brown, Beaumont, President; Dr. A. A. Ledbetter, Medical Arts Building, Houston, Secretary.

Eleventh District Society, Palestine, Oct., 1940. Dr. Clayton Shirley, Tyler, President; Dr. C. C. McDonald, Tyler, Secretary.

Twelfth, Central Texas District Society, Marlin, July 9, 1940. Dr. Dan Warren, Waco, President; Dr. R. K. Harlan, Temple, Secretary.

Thirteenth, Northwestern District Society, Wichita Falls, September. Dr. Tom Bond, Fort Worth, President; Dr. J. Edward Johnson, Mineral Wells, Secretary.

Fourteenth District Society, Greenville, Dec., 1940. Dr. Ira L. Thomas, Gainesville, President; Dr. R. S. Usry, 1835 Garrett, Dallas, Secretary.

Fifteenth, Northeast District Society, Texarkana, Oct. 8, 1940. Dr. Hugh M. Ragland, Gilmer, President; Dr. J. N. White, Texarkana, Secretary.

CLINICS

Fort Worth Medical and Surgical Clinics, Fort Worth, September 24. Dr. Sim Hulsey, Chairman, Clinic Committee.

NATION'S INFANT DEATH RATE DECREASES

The lowest infant death rate in the nation's history was recorded in 1939, according to preliminary tabulations made public today by the Census Bureau, Department of Commerce.

The 1939 infant death rate of 48.0 deaths per one thousand live births is based on 108,532 deaths of infants under one year of age. In 1938 there were 116,702 deaths which resulted in a rate of 51.0. The 1937 rate was 54.4 based on a total of 119,931 deaths. The record-breaking mark of 1939 represents the culmination of two decades of general decrease in infant mortality.

Decreases in the infant mortality rate in 1939, compared with the previous year, were reported by forty-two states and the District of Columbia. The rate rose during the same period in six states. Minnesota's rate of 35.4 was lowest last year. New Mexico, with a rate of 109.3 and Arizona, 95.5, reported the highest rates last year.

DANGERS OF HEAVY SUGAR SOLUTIONS

Concentrated solutions of sucrose (sugar), often injected into the vein to reduce increased blood pressure within the skull, should not be administered to patients with kidney damage, and large or repeated doses by vein should be avoided in any case, W. A. D. Anderson, M. D., and W. R. Bethea, Jr., Memphis, Tenn., warn in *The Journal of the American Medical Association* for May 18.

They report the finding of kidney lesions during postmortem examination of six patients given such solutions. Although the degree of functional damage from such lesions has not yet been determined, it seems probable that there is significant change in the kidneys' efficiency, the authors believe.

INHALING OF SHAVED HAIR

There is no danger of inhaling hair from dry shaving, as the diameter of human hair is too great to permit successful inhalation, *The Journal of the American Medical Association* for March 16 declares in answer to an inquiry.

"Investigation of the possibilities has shown that one cannot cut segments short enough to be inhaled," *The Journal* says. "After prolonged attempts the project has been given up."

BRONCHOSCOPY IN LUNG CANCER

Because approximately 10 per cent of all cancer deaths are due to primary cancer of the lung, a condition for which surgery now offers a good chance of survival if performed early, all suspected cases should be examined with a bronchoscope (an instrument for viewing the interior of the windpipe), Richard H. Overholt, M. D., and William Ray Rumel, M. D., Boston, declare in *The Journal of the American Medical Association* for March 2.

Such an examination should be made of all patients with a dry or productive cough, either alone or in association with fever, chest pain or discomfort, bleeding and wheezing, the two Boston doctors say.

Pointing out that cancer of the lung is 100 per cent fatal without surgical treatment, the authors report that in a group of seventeen patients who had a diseased lung removed, eight are living and well with no evidence of recurrence of the cancer. They are all able to carry on the same activities in which they were engaged before the operation. Of four patients from whom a lobe of the lung was removed, three recovered from the operation and were discharged as improved.

"The numerical importance of the problem becomes apparent," the physicians observe, "when it is appreciated that approximately 15,000 people in the United States die each year from cancer originating within the lung, and approximately 150,000 persons die from cancer of all types each year. The lung is a common, rather than a rare, site for the development of a primary malignant growth."

LIBRARY NOTES

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Requests for packages should be addressed "Library, State Medical Association of Texas, 1404 W. El Paso Street, Fort Worth, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Only one package may be borrowed at a time, and packages are allowed to remain in the hands of the borrower for 14 days.

Package Service

Packages were mailed to the following from the Library of the State Medical Association during June:

Dr. H. B. Eisenstadt, Port Arthur—*Shoulder, diseases* (11 articles).

Dr. E. King Gill, Corpus Christi—(1 journal).

Dr. Edmond Doak, Taylor—*Roentgen Rays, toxicity* (5 articles).

Dr. O. J. Emery, Rule—*Anemia, in pregnancy and puerperium* (21 articles).

Dr. H. N. Lusk, Levelland—*Neuritis, multiple* (9 articles).

Dr. C. L. Curlee, Sinton—*Paralysis, General, therapy* (5 articles).

Dr. William M. Blair, Wharton—*Hernia, diaphragmatic* (18 articles); *Diaphragm, eventration* (7 articles).

Dr. E. D. McDonald, Santa Anna—*Bladder, inflammation* (12 articles).

Dr. M. H. Moore, Tyler—*Lambliasis* (16 articles).

Dr. F. T. McIntire, San Angelo—*Myasthenia, gravis* (20 articles).

Dr. Howard Dudgeon, Jr., Waco—*Spleen, rupture* (8 articles).

Dr. Robert H. McCarty, Lubbock—*Blood Pressure, high* (23 articles).

Dr. Walter D. Brown, Beaumont—*Urinary Tract, diseases* (9 articles).

Dr. A. B. Goldston, Amarillo—*Stomach, cancer* (40 articles).

Dr. E. L. Graham, Cisco—*Undulant Fever, diagnosis and therapy* (27 articles).

Dr. M. L. Wilbanks, Greenville—(1 book).

Dr. R. A. Duncan, Amarillo—*Intestines, diverticula* (17 articles).

Dr. L. A. Lavanture, Marfa—*Aneurysm, cirsoid* (7 articles).

Dr. Alfred W. Harris, Dallas—(2 journals).

Dr. Hugh Lumpkin, Amarillo—*Pregnancy, extrauterine* (30 articles).

Baylor Medical Library, Dallas—(2 journals).

Dr. S. W. Mantzel, Giddings—*Myocarditis* (10 articles).

Dr. Lawrence W. Johnston, Terrell—*Alcoholism* (23 articles).

Dr. Bernard B. Friedman, Corpus Christi—(5 journals).

Dr. John R. Sessums, San Angelo—*Diarrhea, in infants and children* (21 articles).

ACCESSIONS

Williams & Wilkins, Baltimore—Maher and Wosika: Electrocardiography, third edition.

W. B. Saunders Company, Philadelphia—Ewing: Neoplastic Diseases, fourth edition.

Lea & Febiger, Philadelphia—Haden: Principles of Hematology, second edition.

SUMMARY

REPRINTS RECEIVED, 1,325. LOCAL USERS, 25.
JOURNALS RECEIVED, 141. BORROWERS BY MAIL, 25.
ITEMS CONSULTED, 100. PACKAGES MAILED, 26.
ITEMS TAKEN OUT, 80. ITEMS MAILED, 350.
TOTAL ITEMS CONSULTED AND LOANED, 530.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES

The following products have been accepted by the Council on Pharmacy and Chemistry of the Amercian Medical Association for inclusion in New and Nonofficial Remedies:

Ampuls Sodium Cacodylate-Maltbie, 0.1 Gm. (1½ grains) **1 cc.**—Each ampule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104), 0.1 Gm. (1½ grains). Maltbie Chemical Co., Newark, N. J.

Ampuls Sodium Cacodylate-Maltbie, 0.2 Gm. (3 grains) **1 cc.**—Each ampule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104), 0.2 Gm. (3 grains). Maltbie Chemical Co., Newark, N. J.

Ampuls Sodium Cacodylate-Maltbie, 0.325 Gm. (5 grains) **1 cc.**—Each ampule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104), 0.325 Gm. (5 grains). Maltbie Chemical Co., Newark, N. J.

Ampuls Sodium Cacodylate-Maltbie, 0.5 Gm. (7½ grains) **1 cc.**—Each ampule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104), 0.5 Gm. (7½ grains). Maltbie Chemical Co., Newark, N. J.

Ampuls Sodium Cacodylate-Maltbie, 1.0 Gm. (15½ grains) **1 c.c.**—Each ampule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104), 1.0 Gm. (15½ grains). Maltbie Chemical Co., Newark, N. J.

Ampoules Bismuth Subsalicylate with Chlorobutanol in Oil, 1 cc.—Each cubic centimeter contains bismuth subsalicylate-U. S. P. (New and Nonofficial Remedies, 1939, p. 141) 0.13 Gm. (2 grains) and chlorobutanol 0.03 Gm. (0.46 grains), suspended in sweet almond oil. Upjohn Company, Kalamazoo, Mich.

Bismuth Subsalicylate with Chlorobutanol in Oil, 30 cc. Vials.—Each cubic centimeter contains bismuth subsalicylate-U. S. P. (New and Nonofficial Remedies, 1939, p. 141) 0.13 Gm. (2 grains) and chlorobutanol 0.03 Gm. (0.46 grain), suspended in sweet almond oil. Upjohn Company, Kalamazoo, Mich.

Ampoules Solution Decholin-Sodium, 20 per cent, 3 cc.—Each ampoule contains decholin-sodium (New and Nonofficial Remedies, 1939, p. 134) 20 per cent. Riedel-de Haen, Inc., New York.

Urea Pure Crystals-Mallinckrodt.—A brand of urea-N. N. R. (New and Nonofficial Remedies, 1939, p. 480). Mallinckrodt Chemical Works, St. Louis, Mo.

Hyposols Dextrose 10 Gm. (Buffered), **20 cc.**—Each hyposol contains 20 cc. of a solution containing dextrose-U. S. P. (New and Nonofficial Remedies, 1939, p. 160) 10 Gm. buffered with sodium biphosphate 18 mg. and sodium phosphate dibasic 6 mg. The Drug Products Company, Inc., Long Island City, N. Y.

Hyposols Dextrose 25 Gm. (Buffered), **50 cc.**—Each hyposol contains 50 cc. of a solution containing dextrose-U. S. P. (New and Nonofficial Remedies, 1939, p. 160) 25 Gm. buffered with sodium biphosphate 45 mg. and sodium phosphate dibasic 15 mg. The Drug Products Company, Inc., Long Island City, N. Y.

Stearns Cod Liver Oil.—It has a vitamin A potency of not less than 850 units (U. S. P.) per gram and a vitamin D potency of not less than 85 units (U. S. P.) per gram (New and Nonofficial Remedies, 1939, p. 506). Frederick Stearns & Company, Detroit.

Tablets Thiamin Chloride-Squibb, 10 Mg.—Each tablet contains thiamin chloride-Squibb (New and Nonofficial Remedies, 1939, p. 499) 10 mg. E. R. Squibb & Sons, New York.—*J. A. M. A.*, May 11, 1940.

Ampoules Sodium Cacodylate-Upjohn, 0.32 Gm. (5 grains), **1 cc.**—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104) 0.32 Gm. (5 grains). Upjohn Company, Kalamazoo, Mich.

Ampoules Sodium Cacodylate-Upjohn, 0.45 Gm. (7 grains), **1 cc.**—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104) 0.45 Gm. (7 grains). Upjohn Company, Kalamazoo, Mich.

Ampoules Sodium Cacodylate-Upjohn, 0.97 Gm. (15 grains), **2 cc.**—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104) 0.97 Gm. (15 grains). Upjohn Company, Kalamazoo, Mich.

Ampuls Sodium Cacodylate-Merrell, 0.05 Gm. (¾ grain), **1 cc.**—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104), 0.05 Gm. (¾ grain). The William S. Merrell Company, Cincinnati.

Ampuls Sodium Cacodylate-Merrell, 0.1 Gm. (1½ grains), **1 cc.**—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104), 0.1 Gm. (1½ grains). The William S. Merrell Company, Cincinnati.

Ampuls Sodium Cacodylate-Merrell, 0.2 Gm. (3 grains), **1 cc.**—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104) 0.2 Gm. (3 grains). The William S. Merrell Company, Cincinnati.

Ampuls Sodium Cacodylate-Merrell, 0.324 Gm. (5 grains), **1 cc.**—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104) 0.324 Gm. (5 grains). The William S. Merrell Company, Cincinnati.

Ampuls Sodium Cacodylate-Merrell, 0.454 Gm. (7 grains), **1 cc.**—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1939, p. 104) 0.454 Gm. (7 grains). The William S. Merrell Company, Cincinnati.

Unguentum Lunosol 5 Per Cent-Hille—Lunosol (New and Nonofficial Remedies, 1939, p. 457) 5 Gm., incorporated in 95 Gm. of an unguent composed of 11 Gm. of water, 52.5 Gm. of anhydrous lanolin and 36.5 Gm. of liquid petrolatum in each hundred grams. Hille Laboratories, Chicago, Ill.

Unguentum Lunosol 10 Per Cent-Hille.—Lunosol (New and Nonofficial Remedies, 1939, p. 457) 10 Gm., incorporated in 90 Gm. of an unguent base composed of 17.5 Gm. of water, 55.5 Gm. of anhydrous lanolin and 27 Gm. of liquid petrolatum in each hundred grams. Hille Laboratories, Chicago, Ill.

Ampules Pontocaine Hydrochloride "Niphanoid" for Spinal Anesthesia, 10 mg.—Ampules containing pontocaine hydrochloride (New and Nonofficial Remedies, 1939, p. 73) in finely divided and instantly soluble form. The trade term "Niphanoid" (from the

Greek, "snow like") is applied to a manufacturing process which it is claimed makes the material more readily soluble. Winthrop Chemical Co., Inc., New York.

Ampules Pontocaine Hydrochloride "Niphanoid" for Spinal Anesthesia, 20 mg.—Ampules containing pontocaine hydrochloride (New and Nonofficial Remedies, 1939, p. 73) in finely divided and instantly soluble form. The trade term "Niphanoid" (from the Greek, "snow like") is applied to a manufacturing process which it is claimed makes the material more readily soluble. Winthrop Chemical Co., Inc., New York.—*J. A. M. A.*, April 20, 1940.

ACCEPTED DEVICES FOR PHYSICAL THERAPY

The following devices have been accepted by the Council on Physical Therapy of the American Medical Association for inclusion in its list of accepted devices for physical therapy:

Lepel Short Wave Machine, Model TC.—This unit is designed for medical and surgical diathermy in the office or hospital. It is a single cabinet model with dimensions of 38 by 24 by 16 inches and weighs approximately 175 pounds. Condenser electrodes, induction cable, air-spaced electrodes and direct contact metal electrodes (an unusual method of short wave application) are included with the unit. Outlets are provided for electrosurgery and short wave treatment; ultraviolet quartz lamps may also be energized from the treatment terminals. A time switch may be set to cut off treatment periods automatically. Investigations under the auspices of the Council demonstrated that the apparatus was satisfactory. Lepel High Frequency Laboratories, Inc.—*J. A. M. A.*, May 11, 1940.

Fischer Model S Short Wave Unit.—This unit is designed for medical and minor surgical diathermy. It combines the cabinet and portable features, since the section containing the short wave mechanism can be removed from the cabinet and carried. Accessories that have been tested include cuff and inductance cable electrodes. Electrosurgical accessories are also available but were not tested. The shipping weight is 122 pounds and the net weight 92 pounds. The apparatus was reported to give satisfactory clinical service in investigations conducted for the Council. H. G. Fischer and Company, Chicago.

Erex Hypo-Allergenic Covers.—The Erex Hypo-Allergenic Pillow, Mattress and Crib Covers are intended to protect individuals allergic to dust from pillows and also to provide general sanitation of the pillow and its protection from perspiration. The covers are made of a rubberless fabric called "Revolite." The cover is advocated by the firm for asthma, hay fever and sinus sufferers. According to the producers, the covers launder well and will remain permanently soft and pliable. Evidence was submitted by the firm to show the resistance of the covers to heat and cold and a variety of chemical agents. The covers were investigated by the Council and found to be as satisfactory as such covers probably can be made. Erex Hypo-Allergenic Products Company, St. Louis.—*J. A. M. A.*, May 25, 1940.

Telex Hearing Aid.—The Telex Hearing Aid consists of the following parts: Microphone and amplifier unit, Serial No. 10340; battery and flexible leather battery case; miniature crystal receiver with molded plastic ear piece. The microphone and amplifier units are disk shaped and weigh approximately 5¼ ounces. The battery case with the battery weighs 14½ ounces. The receiver with the molded ear piece and cord weighs approximately one-half ounce. Telex Products Company, Minneapolis, Minn. —*J. A. M. A.*, April 27, 1940.

Sulfapyridine Sodium.—The monohydrate sodium salt of 2-sulfanilamidopyridine (Sulfapyridine, Revised Supplement to New and Nonofficial Remedies, 1939, p. 28; also *The Journal of the A. M. A.*, Jan. 27, 1940, p. 327). The monohydrate sodium salt of sulfapyridine has essentially the same therapeutic activities and properties as does sulfapyridine. Hence at the present time its use can be recommended only in pneumococcic infections, and its clinical use in gonococcic, streptococcic, staphylococcic, Welch bacillary and other types of infections must be considered in the experimental stage. The indications for the use of sulfapyridine sodium are those cases of severe penumococcic infections in which it is desired to obtain promptly adequate blood concentrations of sulfapyridine or in patients who, by reason of vomiting, are not obtaining proper concentrations of the drug when sulfapyridine is given orally, and finally, patients in whom either the absorption of the drug is poor or its rate of conjugation is such that adequate concentrations of sulfapyridine cannot be obtained in the blood by other means. Frequent and repeated injections of the drug are not advisable because such injections tend to produce thrombosis of the veins.

Hyposols Bismuth Subsalicylate in Oil, 60 cc. size.—This multiple dose vial contains in each cubic centimeter bismuth subsalicylate (New and Nonofficial Remedies, 1939, p. 141) 130 mg., chlorobutanol anhydrous 30 mg. and arachis oil q. s. Drug Products Company, Inc., Long Island City, N. Y.

Capsules Ephedrine Sulfate-Smith-Dorsey, 0.048 Gm. (¾ grain).—Each capsule contains ephedrine sulfate (New and Nonofficial Remedies, 1939, p. 226) 0.048 Gm. The Smith-Dorsey Co., Lincoln, Nebr.

Capsules Ephedrine Sulfate-Smith-Dorsey, 0.025 Gm. (¾ grain).—Each capsule contains ephedrine sulfate (New and Nonofficial Remedies, 1939, p. 226), 0.025 Gm. The Smith-Dorsey Co., Lincoln, Nebr.

Ampul-Vials Sodium Morrhuate with Quinine.—Each cubic centimeter contains sodium morrhuate (New and Nonofficial Remedies, 1939, p. 461), 0.05 Gm., quinine alkaloid-U. S. P. 0.02 Gm., and benzyl alcohol 0.02 Gm. in aqueous solution. The National Drug Co., Philadelphia.

Barbital-Abbott Tablets, 5 grains.—Each tablet contains barbital-Abbott (New and Nonofficial Remedies, 1939, p. 115), 5 grains. Abbott Laboratories, North Chicago, Ill.—*J. A. M. A.*, March 30, 1940.

PROPAGANDA FOR REFORM

The Carotene and Vitamin A Content of Market Milks.—The Council on Foods in formulating policies regarding processed foods has been cognizant of the lack of sufficient data on the vitamin A content of natural foods. Milk and dairy products are known to be important sources of this factor. Data on the carotene and vitamin A content of market milks have been obtained by Professor Peterson and his collaborators at the University of Wisconsin and are made available in a report authorized for publication by the Council on Foods. The following is a summary of the data compiled by Professor Peterson and his collaborators: The carotene and vitamin A contents of milks marketed by eight large distributors in the Madison and Milwaukee areas of Wisconsin have been determined monthly during a period of eighteen months. These milks fall into four groups: (1) market (mainly Holstein), (2) Guernsey, (3) vitamin D (mainly Holstein) and (4) certified. All milks showed marked seasonal changes in both carotene and vitamin A contents. The seasonal changes in carotene were greater than those for vitamin A. The milks were fairly similar in vitamin potency

per gram of butter fat. Certified milks were somewhat higher than the other milks during the late winter months. Guernsey milk, because of its higher fat content, had a higher potency on the fluid basis than the others. Per quart, the winter milks (January-April) averaged: market 327 micrograms (1,088 U. S. P. units), Guernsey 372 micrograms (1,241 U. S. P. units) and certified 400 micrograms (1,334 U. S. P. units). The corresponding figures for summer (June-October) were 572 (1,906), 727 (2,415) and 599 (1,995).—*J. A. M. A.*, May 4, 1940.

The Lifetime Eyesight Service Fraud.—The Bureau of Investigation of the American Medical Association reports that in February, 1938, the Post Office Department reported that the mails had been closed to a fraudulent concern known as the Natural Eyesight Institute, Inc., Urbane L. Barrett, president, and Thomas J. Barrett, secretary, all of Los Angeles. The fraud was shown to consist in selling on the mail-order plan a "system" of alleged eye exercises in which a mechanical gadget played a large part. The promoter of this swindle advertised that by the use of his mechanical toy and his "system" one could "See Without Glasses"; yet the facts were that the promoter himself was obliged to wear glasses! It was further claimed that the "system" would enable the purchaser of it to abandon the use of spectacles for the correction of defects of visual acuity due to nearsightedness, farsightedness, astigmatism, "old age sight," squint, cross-eyes, weak eyes and failing vision due to age. Two months later Urbane Barrett attempted to evade the fraud order by changing the name to "Lifetime Eyesight Service" and having remittances sent to him at Roscoe, Calif., through an express company. As a result the Post Office Department issued a supplementary order in April, 1939, against Lifetime Eyesight Service, I. Barrett, executive secretary, and their officers and agents as such.—*J. A. M. A.*, May 4, 1940.

Synchrotone Not Acceptable.—The Council on Physical Therapy of the American Medical Association reports that the Synchrotone, manufactured by Hallberg's Synchrotone, Incorporated, New York, is a short wave device which has come to its attention because of the unfounded and misleading advertising used in its promotion. In a folder called "Ultra Short Wave Therapy from the Selective Aspect" the most objectionable feature is the repeated claim that specific wavelengths have been definitely established as being valuable in the treatment of specific diseases, and that the effects of the various wavelengths are achieved independently of heat. It is further claimed that the "Synchrotone will be found quite capable of supplementing the more powerful U. S. W. apparatus," despite its so-called "athermal" type of therapy. It is asserted that "it is safe to state that the belief that 'heating is the only therapeutic effect' from radio waves is rapidly weakening" and "The selective low intensity and low temperature ultra high frequency treatments, so specifically emphasized by Hallberg, are finding widespread recognition among physicians here and abroad." No evidence for these assertions was cited or is known to the Council. Finally, it is indirectly implied that the Synchrotone may be used on a variety of ills for which the use of short wave therapy has not been recognized by the Council. The Council on Physical Therapy voted not to accept the Synchrotone for inclusion on its list of accepted devices because of the misleading and unscientific promotional methods of the firm, which encourage irrational therapeutic practices.—*J. A. M. A.*, May 11, 1940.

A. G. Goodman's Mail Order Frauds.—The Bureau of Investigation of the American Medical Association reports that Albert G. Goodman of Jersey City, N. J., and New York, has been a medical mail order quack for some years. The Post Office Department proceeded against Goodman in 1931. At that time he was selling a nostrum called "Nervor" for "Nervous Exhaustion." To forestall the issuance of a fraud order Goodman made an affidavit that he would go out of the business he was then engaged in and never resume it. In 1936-1937 the Federal Trade Commission ordered Goodman—as Robert Holmes—to cease doing the fraudulent business that he had sworn to abandon—but of course he didn't. Finally in 1939 the Post Office Department interested itself in Goodman's fraudulent mail order activities, which at that time comprised the Kelp-Tone swindle, and in June, 1939, a fraud order was issued against the names Kelp-Tone Company, A. G. Goodman, Robert Holmes and Richard Blackstone. According to Goodman "Kelp-Tone" would completely and permanently overcome any number of diseases, including the common cold, anemia, weakness, rickets, sciatica, goiter, asthma, neurasthenia, "nervous disorder," arthritis, gout, "disturbance of the reproductory organs," "Female disorders," "bladder affections," "kidney disorders," subnormal growth, high blood pressure, bone diseases, tooth decay and "nail brittleness." Analysis showed Kelp-Tone tablets to contain about 1/100 grain of iodine and small amounts of sulfur, phosphorus, sodium, potassium, chloride, iron, calcium, magnesium, and other elements. Under the trade style The American Laboratories at 246 Fifth Avenue, New York, Goodman sold a number of "patent medicines," including "Nervor" for "nervous exhaustion," "Pilesal" for piles, "Eczemasal" for eczema, "Stomesal" for "stomach trouble," "Rheumesal" for rheumatism and "Pimplesal" for pimples! Under the name Richard Blackstone, and later under the name Nerve Culture Institute, Goodman styled himself a "Nerve Specialist and Hygienist." This fake was actually an attempt to sell a "Course of Instruction" for which Goodman asked $10. The "courses" sent out were the same whether they went to a young woman suffering from "bashfulness" or to an elderly roué who had admitted "bad sex habits." Goodman's "Robert Holmes" swindle was carried on from Jersey City, N. J. It was essentially the same fake as the Richard Blackstone "Course of Instruction" except that instead of selling for $10 it sold for $50, later marked down to $35. The Goodman case emphasizes again that the issuance of fraud orders by the Post Office Department is not always effective against such individuals.—*J. A. M. A.*, May 11, 1940.

The Promiscuous Use of the Barbiturates.—The Board of Trustees of the American Medical Association requested the Council on Pharmacy and Chemistry to make a study of the promiscuous use of barbiturates, particularly with reference to the dangerous use of these products by the public. The first section of the report, entitled "A Study of the Promiscuous Use of the Barbiturates: Their Use in Suicides," was published in *The Journal of the A. M. A.*, April 8, 1939, p. 1340. The second section, entitled "The Promiscuous Use of the Barbiturates: II. Analysis of Hospital Data," has now been published by the Council. Both of these reports were prepared for the Council by Dr. W. E. Hambourger of Western Reserve University. The following is a summary of Dr. Hambourger's study: 1. During the decade 1928-1937, thirteen hospitals with combined admissions of more than 1,250,000 received 643 cases of acute barbiturate poisoning. 2. One out of every 1,900 admissions was due to acute barbiturate intoxication. 3. Barbiturates were responsible for one-seventh of the acute poisonings due to all drugs except alcohol and carbon monoxide. 4. The fatality rate in the cases of acute barbiturate poisoning was 7.3 per cent. 5. As each new barbiturate has been introduced clinically and has become publicized there has been a noticeable trend toward its

use in poisoning cases. 6. The lowest fatal dose for barbital reported by these hospitals was 30 grains (2 Gm.); the medium dose in fatal cases was 90 grains (6 Gm.). For phenobarbital the minimum fatal dose reported was 25 grains (1.7 Gm.); the medium dose 142 grains (9.5 Gm.). The wider margin of toxicity for phenobarbital is probably accidental. 7. Hypersusceptibility to therapeutic doses of a barbiturate was charged in thirteen cases admitted to ten of the hospitals, about one case for every 90,000 admissions. 8. Addiction to barbiturates was the reason for admitting eighty-five patients out of the total of 1¼ millions admitted for all causes, about one barbiturate addict in every 15,000 admissions. 9. Barbiturates accounted for more than 10 per cent of all addiction cases, excluding chronic alcoholism, admitted to the thirteen hospitals. 10. Two-thirds of the barbiturate addicts who gave information claimed that they became familiar with the drug through a physician. 11. Nearly a third of the addicts for whom the information was recorded developed craving when the barbiturate was withheld. 12. None showed any serious wthdrawal symptoms. 13. No factual data could be obtained concerning the involvement of barbiturates in automobile accidents and criminal assaults, although from the nature of the actions of these drugs this might be expected.—*J. A. M. A.*, May 18, 1940.

Barbital and Its Derivatives.—The effectiveness of barbital and certain of its derivatives is well recognized. Adverse results from their use, whether due to improper application or to so-called unavoidable accidents, have led to condemnation. In a report previously published in *The Journal of the A. M. A.* by Dr. W. E. Hambourger it was shown that "the evils of these drugs (the barbiturates) includes habit formations, toxic cumulative action, their substitution for alcoholic beverages for drunken episodes, their use for successful as well as unsuccessful suicidal attempts, their improper use being a recognized causative factor in many motor accidents and their improper use being a recognized etiologic factor in some criminal assaults. . . ." The barbituric addiction is particularly vicious. Members of the medical profession will certainly not believe that barbiturates are free from possibility of addiction. Other undesirable results of barbiturate medication which are important, but commonly overlooked, are the toxic manifestations from (*a*) idiosyncrasy, and (*b*) long continued use. Dr. Hambourger has now published a second report which presents hospital data and a review of the regulations of the sale of barbiturates. Restrictions enforced by law have become increasingly necessary with the education of the public to the possibilities that lie in the ingestion of the malonylurea derivatives. The Council on Pharmacy and Chemistry has long adopted the attitude that the practice of using nonvolatile substances as anesthetics, especially in inexperienced hands, is not safe. Except for those agents which are rapidly eliminated such as pentothal sodium and evipal soluble, the Council still maintains this attitude. More rigid enforcement of restrictions on the prescribing of these potentially dangerous drugs has the wholehearted approval of the Council and of *The Journal of the A. M. A.*—*J. A. M. A.*, May 18, 1940.

A "Fat Cure" Fraud.—The Bureau of Investigation of the American Medical Association reports that the Post Office Department has issued a fraud order against an individual operating a mail-order "obesity cure" from Davenport, Iowa, under the names Mac Rory and R. B. Macrorie. According to the memorandum issued on this case by the Solicitor for the Post Office Department, a chief objection to Macrorie's scheme was that though the man, before selling an individual the "secret" of his "different" treatment for excess weight, represented that his method involved no rigorous dietary restrictions, nevertheless after the victim had paid over his money he then learned that he was expected to eliminate from his diet "fried things, oils, salad dressings, butter, oleo, cheese, whole milk, candy, chocolate, nuts, pies, cake or other pastries, olives, beer." Furthermore, to obtain "quick" reduction of weight, he must limit himself to two meals a day. The memorandum also brought out that the expert medical evidence presented had shown that obese persons are of two principal types—those whose overweight is due to excessive eating, and those whose obesity is caused by disturbances of the endocrine glands. In the first type any substantial reduction in weight can result only from a lowering of the daily food and caloric intake and the ability of the body to burn its accumulated fat. Hence no reduction could be accomplished by following the advice given by Macrorie to "eat freely of bread and potatoes" and to "be sure to eat much starch food, the more the better." Though the second type of obesity—that due to hyperthyroidism—is not controllable by diet, but must be treated according to the patient's individual needs, nevertheless it was shown that in at least one instance Macrorie had sold his method on representations that it *would* reduce the weight of a person whose obesity was due to hyperthyroidism. The Solicitor found that Macrorie's business was a scheme for obtaining money through the mails by means of false and fraudulent pretenses, representations and promises, and on his recommendation the Post Office Department issued a fraud order on Sept. 19, 1939, against the names of MacRory and R. B. Macrorie.—*J. A. M. A.*, May 18, 1940.

"Herbola-Hindu Health Herbs" Hokum. — The Bureau of Investigation of the American Medical Association reports that Kaleas Chowdbury, also known as Kaelas Choudbury, a native of Calcutta, India, introduced to the public his "Herbola-Indian Health Herbs" and "Eetola." Chowdbury's nostrum business was conducted from Gary, Ind., under the high-sounding names Aryan Herb Company and Aryan Herb Tonic Company. In May and December, 1937, the Food and Drug Administration seized consignments of Eetola that had been shipped in interstate commerce. Government chemists reported that the product consisted essentially of extracts of plant drugs including hydrastis; volatile oils including those of sandalwood and cubeb; balsam copaiba, and water. The government charged that the label fraudulently represented that Eetola would cure chronic gonorrhea, stricture, prostate trouble, bladder and urethral infections, white and yellow discharge, burning urination, pain under the abdomen of men and women, kidney infection and "weak manhood." Around this time, the Post Office Department also was investigating the outfit and its preparations—Eetola, Herbola and a so-called tea—which were being sold through the mails under representations that they would reduce high blood pressure to normal and overcome numerous other ailments, including kidney and bladder disorders, all kinds of female troubles, lost sexual vigor, rheumatism, stomach and liver complaints, and some other things. According to the memorandum, analysis of Herbola by the government chemists showed that, in addition to the ingredients declared by Chowdbury, it contained 14.80 grains of epsom salt per hundred cubic centimeters and that a "tea" sold in connection with it was composed of powdered black haw and watermelon seed. The Solicitor's memorandum brought out that expert medical evidence had been presented to show that the various disorders for which Chowdbury's nostrums had been sold were not curable by these laxative and diuretic mixtures. Accordingly a fraud order was issued by the Post

Office Department on Sept. 14, 1939, against Aryan Herb Company, Aryan Herb-Tonic Company, Aryan-Herb Tonics Company, Miss Stuart, Miss R. Stuart, R. Stuart, R. Stuart, Secretary, and their officers and agents as such—but the name of Kaleas Chowdbury was not included.—*J. A. M. A.*, May 18, 1940.

Rubber Sheaths.—The Council's Committee on Contraceptives reports that the condom is perhaps the simplest, most widely used contraceptive measure. When properly tested sheaths are used skillfully, the patient obtains practically complete protection. Authorities also agree, in general, that the condom is the most useful of all methods for venereal disease prophylaxis. The chief difficulty of the method lies in the existence of inferior articles. Methods of manufacturing have improved considerably in the past few years when the dipping in crape rubber solution was replaced by the liquid latex method. However, the Department of Agriculture is continuing to collect and examine a great many more samples. The more recent investigations have shown that imperfect samples are still encountered, but that the market contains a far higher quality rubber sheath than at any other time. It is therefore anticipated that in the future most condoms purchased on the market will conform to the desired degree of quality which would make for a fairly reliable method for venereal prophylaxis as well as for purposes of therapeutic contraception.—*J. A. M. A.*, May 25, 1940.

Heparin.—As a result of the rapidly developing information concerning this substance during recent years, heparin, from being a rather unique anticoagulant with limited laboratory application, has become a promising clinical adjunct. With a highly purified product now available, organic chemists have made progress in establishing the chemical structure of the heparin molecule. The isolation of relatively pure heparin has led to an extensive examination of the relationship of this anticoagulant to the problem of thrombosis, particularly, by Best and his collaborators at Toronto. It was demonstrated that heparin greatly inhibits the formation of thrombi produced in animals by mechanical or chemical trauma to the intima of large exposed veins. The ability to produce coronary thrombosis in dogs by means of sodium ricinoleate was also greatly diminished in heparinized animals, as compared to control dogs which did not receive heparin. These successful experiments have stimulated the use of pure heparin in clinical cases of thrombosis and remarkable results have been reported at the Toronto General Hospital and in Stockholm. Heparin has been employed postoperatively with a high degree of success. Although it is somewhat difficult to evaluate postoperative treatment for the prevention of thrombosis, more direct evidence of the value of heparin may be obtained in the treatment of an existent thrombus. Striking claims have been made in the Swedish clinics for the value of heparin in the treatment of thrombosis in the main trunk of the central vein of the retina, and subsequent definite return of visual acuity has been reported. Similar efficacious results with heparin are reported in vascular surgery. Future clinical work may definitely establish the value of heparin in clinical thrombosis, coronary thrombosis, thrombosis of the large veins and thrombophlebitis.—*J. A. M. A.*, May 25, 1940.

Contraindications to Estrogen Therapy.—Malignant growths of the mammary gland and the uterus have been induced in rodents with estrogens by numerous investigators. Some physicians, however, have doubted that the therapeutic administration of estrogens in the human being could result in the development of similar malignant growths. It has been pointed out that, theoretically, tremendous dosages of estrogens might be required to induce human cancer, when calculated according to body weight. No doubt estrogens have been used intensively for relative too short a time to warrant the conclusion that mere absence of reports from the literature justified a disregard for the possible consequences of estrogenic therapy. Recently two significant reports have appeared which should indicate the possible dangers of administration of estrogens; one reports a case of mammary cancer following prolonged use of estrogens, and the other reports the appearance of carcinoma of the cervix in three patients among forty-three who were treated with estrogens for kraurosis vulvae and senile vaginitis. The Council on Pharmacy and Chemistry and *The Journal of the A. M. A.* have repeatedly warned against the indiscriminate and prolonged use of estrogens and have emphasized the possible occurrence of mammary carcinoma in patients who are susceptible to the development of such malignant growths. It would be unwise to consider that there is safety in using small doses of estrogens, since it is quite possible that the same harm may be obtained through the use of small doses of estrogen if they are maintained over a long period. While there appears little or no evidence to indicate that normal women may develop such malignant growths, it would be well for the physician to realize that this is by no means an impossibility in patients who have a personal or familial history of genital or mammary cancer. It has been reported that the new synthetic estrogen diethylstilbestrol is far more active than the natural estrone and estradiol in the production of uterine and extra-uterine fibroids in guinea pigs. There is no evidence, however, that it is more carcinogenic than these substances.—*J. A. M. A.*, April 20, 1940.

Some Alleged "Delayed Period" Cures.—The Bureau of Investigation of the American Medical Association reports that a fraudulent medical mail-order business conducted under various names from Lowell, Massachusetts, was debarred from the mails July 21, 1939. In 1918, according to the report of the Post Office Department, one Isidore Hymes incorporated at Lowell a business known as Western Refining Company, with a capital of $20,000. One of the assets of the business is a drug store from which Hymes conducted his mail-order business under various trade names. Some of these were: Cote Products Company, The Motex Company, Florence Richmond, and Betty Lakin. The business of these variously named concerns consisted in selling through the mails certain pills and capsules for the alleged relief of "delayed menstruation." The products were designated: Cote No. 1 Pills ($2 a box of 20 pills); Cote Special Formula 4XXXX ($3 a box); Cote Super-F Capsules ($5 a box); Regular Motex Pills ($2 a box); Special-X Motex Pills ($3 a box), and Motex Super-F Capsules ($5 a box). It is notorious that "patent medicines" sold for the alleged relief of what is euphemistically called "suppressed menstruation" are most frequently bought by women who, believing themselves pregnant, wish to produce an abortion. The business ran true to type in that none of the advertisements frankly stated that the pills or capsules would produce an abortion. To have so admitted would have been to violate a federal law. But neither did the advertising come out frank-not sold for abortifacient purposes. The composily in easily understood language and warn purchasers that the Cote or Motex pills or capsules were tion of the Hymes nostrums was similar to that of most of the abortifacient "patent medicines." They contained varying amounts of such irritant volatile oils as green apiol and oil of savin; they contained such purgatives as aloes and castor oil; they also had extract of cotton root bark, oil of rue, "ergotin

(Bonjean)," and so on. Medical testimony offered in behalf of the government brought out that the amount of apiol in the nostrums might prove poisonous to the users; also that the various preparations under discussion were ineffective in the treatment of the several causative and accompanying conditions of amenorrhea and dysmenorrhea. Hymes' attorneys are reported to have offered no medical testimony of any nature in support of their case. As a result the Solicitor for the Post Office Department recommended the issuance of a fraud order against the variously named companies and their officers and agents as such. On April 6, 1940, the Federal Trade Commission issued an order prohibiting the Western Refining Company, Lowell, Mass., also trading as The Motex Company and Cote Products Company, from making certain misrepresentations in the sale of Motex, Motex Pills and Cote Pills. Among these were that the products constitute safe, competent or scientific remedies for delayed menstruation, contain no harmful or dangerous drugs, and will have no ill effects on the body.—*J. A. M. A.*, April 20, 1940.

Atmoray (Ozone Generator) Not Acceptable.—The Council on Physical Therapy of the American Medical Association reports that the Atmoray is described by the manufacturer as a device used to deodorize and purify air by generating ozone. It is claimed that the Atmoray produces an "invisible ray" which drives out "injurious bacteria from affected parts of the body." No description of the mechanism of the device is given in the advertising pamphlet and there is no statement as to what method is used to produce ozone, or how much ozone is produced. It is apparently indicated that an attempt has been made to imply, through the use of confusing, indefinite statements, that the Atmoray has unexplainable mystic qualities. Where specific therapeutic claims are made, no evidence is given to substantiate the statements. There is no evidence, for example, that ozone will "attack the impurities of the blood stream and while eliminating the impurities it builds and increases the red blood corpuscles." Ozone, regardless of where or how it is generated, has little or even no practical effect on bacteria or germs. Experiments performed long ago on all kinds and types of bacteria in both the dry and moist condition showed that for ozone to be even a little effective it had to be present in such concentrations as were distinctly harmful to the delicate membranes of the nose, throat and lungs of a human being. While ozone tends to fatigue the sensory nerve endings, governing the sense of smell so that an individual can no longer smell odors, it does not act as a deodorant—only as a masking agent or substitute odor. As an oxidizer for fumes, odors or gases, ozone has also been found to be ineffective. The Council on Physical Therapy voted not to include the Atmoray on its list of accepted devices, because the Council believes that the marketing methods and advertising employed by the firm are inimical to the public welfare.—*J. A. M. A.*, April 27, 1940.

Science and Sal Hepatica.—According to the radio advertising of Sal Hepatica, a scientific research conducted by leading medical magazines indicates that a high percentage of doctors always prescribe a saline laxative when treating a common cold. Of course the names of the leading medical magazines are not given. Part of the scientific story is the claim that Sal Hepatica is the "mineral salt laxative that does two things, not just one; it rids the body of waste and it also combats acidity." The history of Sal Hepatica is a strange commentary on the kind of science that used to be sold to credulous Americans. In 1911 Sal Hepatica was advertised as a uric acid solvent, said to be indicated in stomach, liver and kidney disorders, and especially beneficial in rheumatism and gout. In 1916 it was promoted because it was said to be useful in the treatment of pyorrhea. By 1929 it was called the American equivalent of European spas, and listeners were told that it was good also for headaches, colds, rheumatism and autointoxication. Actually there is nothing to Sal Hepatica according to recent analyses except Glauber's salt, baking soda and tartaric acid, common salt, sodium phosphate, a trace of lithium carbonate and water. Any doctor knows what that is good for and a variety of conditions which it is not good for.—*J. A. M. A.*, March 23, 1940.

Scanlan-Morris Oxygen Regulators.—Designed to meter the flow of oxygen, the Scanlan-Morris Oxygen Regulators are applicable to anesthesia apparatus, oxygen tents, nasal catheters and any similar oxygen therapy chambers. The model A1473 is a single stage regulator provided in different sizes and with various types of flow-indicating and control units. The larger sizes provide greater durability and accuracy of control. The gas may enter the inlet of the regulator at varying pressures up to 2,000 pounds. The valve on the outlet is so regulated by a spring and diaphragm that any desired volume of gas at a fixed pressure can be obtained. The model A1474 is a double stage regulator equipped with a dial type, Bourdon tube, liter-flow indicating gauge, which is calibrated in liters per minute from 0 to 15 against a fixed orifice of discharge. A simple discharge outlet permits the discharge only of the volume of gas indicated on the flow meter. The model A1475 is also a double stage regulator but is equipped with a Thorpe tube flow indicator, consisting of a vertical tube of resinous plastic material highly resistant to fracture. A stainless steel flow ball indicates the relative volume of oxygen discharge against a calibrated plate, which is fixed to the reinforcing sleeve around the Thorpe tube. This device is also equipped with a spring valve by-pass, permitting a direct discharge of oxygen from the regulator to the outlet without passing through the flow indicator. This is to provide oxygen more rapidly in cases of emergency. These regulators were submitted for a Council investigation, from which it was determined that they are well constructed and satisfactory. The Scanlan-Morris Company, Madison, Wis., distributor; The Bastian-Blessing Company, Chicago, manufacturer.—*J. A. M. A.*, March 9, 1940.

La France Inhalator.—This is a portable apparatus designed for the administration of a mixture of oxygen and carbon dioxide in cases of asphyxia. Standard equipment includes a carrying case with two 16 cubic foot cylinders connected through valves to a rubberized cloth reservoir, which is in turn connected by rubber hose to two face masks and head harnesses. The inhalator may also be obtained with only a single cylinder, with which an outboard connection for use with 50 and 200 cubic foot cylinders is furnished. Accessories clipped in the case include tongue forceps, an oral screw, and two wrenches for making the necessary connections. All the cylinders contain 70 per cent carbon dioxide. As a result of the Council investigation it was concluded that the La France Inhalator appears to be a well designed and constructed piece of equipment. The American-La France-Foamite Corporation, Elmira, N. Y.—*J. A. M. A.*, March 16, 1940.

The Baker Hospital and J. L. Statler, M. D.—The Bureau of Investigation reports that in its recent article on Norman Baker (*The Journal of the A. M. A.*, Feb. 10, 1940, p. 509) frequent reference was made to the Baker Hospital and J. L. Statler, M. D., who was one of those sentenced along with Baker. In December, 1929, Baker opened the Baker Institute at Muscatine for the treatment of cancer, tumors, goiters, prostate gland troubles, stomach ulcers, rheumatism, gallstones and diabetes. Although

neither Baker nor any of the persons associated with him in the enterprise had been licensed to practice medicine in Iowa, several physicians were employed by him at different times, apparently not for the purpose of treating or directing the treatment of patients but ostensibly for the purpose of making diagnoses. Apparently the sole medicines used, regardless of the so-called diagnosis, were a liquid mixture the formula of which was at that time known only to Baker and a powder the formula of which was at that time known only to Baker's associate, Hoxsey. At this time and subsequently, in the operation of Baker's Hospital in Eureka Springs, Ark., J. L. Statler, M. D., was coöperating with Baker in promoting Baker's claim that cancer was curable. According to the available records, Johnson Lewis Statler was born in Sedgewickville, Mo., in 1883 and was graduated from Barnes Medical College, St. Louis, in 1909. He was licensed in Missouri that same year, in Oklahoma in 1910 and in Iowa in 1916, in both states by reciprocity with Missouri. In an article in *The Journal of the A. M. A.*, for July 31, 1937, it was noted that the application of Statler, doing business as the Baker Hospital, Muscatine, Iowa, for authority to transmit programs to stations in Canada and Mexico was denied by the Federal Communications Commission. The Commission, in denying the Statler application, reported ". . . It is our opinion that the applicant has failed to show that the program service proposed to be rendered (advertising the Baker Hospital) would be in the public interest." According to a news item appearing in the Chicago *Tribune* for Feb. 28, 1932, and referring to some of the facts brought out in Baker's suit against the A. M. A., "Statler, whom former employees had identified as the leading diagnostician of the institute, admitted to Judge G. N. Nordbye that he could not explain how the Baker 'cure' was supposed to seek out and destroy cancerous cells." As a matter of fact, he not only did not know how it worked but he knew that it did not work in a great many cases. Previously he had signed hundreds of death certificates of persons who had died at the Baker Institute at Muscatine, Iowa. Obviously Baker could not have gained much headway if he had not had associated with him a man who was licensed to practice, a man who could legally place after his name the initials "M. D." What price was paid to Statler for supporting the ideas and carrying out the work in the Baker Hospital is not known, but it certainly should have been a goodly sum, for Statler, by joining Baker, made himself a pariah in his chosen profession. So far as the Bureau can determine, Statler is now behind bars pending any subsequent arrangements that may be made in connection with his sentence, which, as it will be recalled, was one year and one day in jail.—*J. A. M. A.*, March 2, 1940.

Misbranded "Patent Medicines."—The Bureau of Investigation of the American Medical Association reports that the following "patent medicines" have been the subject of prosecution by the Food and Drug Administration of the United States Department of Agriculture which enforces the Food, Drug and Cosmetic Act: *Fisher's Diuretic Alterative* (Mrs. E. Heinz, Denver), chiefly, water, alcohol, sugar and small amounts of plant material extracts. *Fisher's Gastric Assimilator* (Mrs. E. Heinz, Denver), containing alcohol, water and plant material extracts. *Fisher's P P P* (Mrs. E. Heinz, Denver), essentially water, alcohol, epsom salt and flavoring. *G. S. I. Gly-So-Iodonate* (National Medical Research Laboratories, Milwaukee), essentially water, alcohol, glycerin, common salt and small quantities of carbonates, sulfates, iodides, phosphates and borates, with traces of formaldehyde and iodoform. *Miller's (Dr.) Intraclean* (Miller Co., Inc., Newark, N. J.), essentially broken senna leaves and buckthorn bark, with a small amount of agar agar. *Mother Hubbard Camphorated Oil* (Mother Hubbard Products Co., Inc., Chicago), not more than 10.6 per cent of camphor. *Mother Hubbard Remedies Laxative Head-Cold Tablets* (Mother Hubbard Products Co., Inc., Chicago), not more than 0.913 grains of acetanilid per tablet. *Orchotine Tablets* (Hudson Pharmacal Co., Inc., Union City, N. J.), animal tissue, probably glandular in nature, with 1/25 grain of extract of nux vomica per tablet. *Tonsol* (Tonsol Co., Elmira, N. Y.), an aqueous solution of a mild silver proteinate compound.—*J. A. M. A.*, March 2, 1940.

Another Bald Fraud—"Linday's New Hair Compound."—The Bureau of Investigation of the American Medical Association reports that "Linday's New Hair Compound" has run afoul of the Post Office Department and been debarred from the mails. The fraud order was made to cover the firm names "Linday" and "Linday Laboratory," New York. On Nov. 22, 1935, the Federal Trade Commission announced that it had ordered this company to cease and desist from making false and misleading representations for its product as a "hair restorer." Linday's New Hair Compound was advertised and sold through the mails as a treatment for growing hair on persons already bald as well as those inclined toward baldness. Government chemists who analyzed this preparation reported that it was essentially a mixture of lard, castor oil, cottonseed oil, cod liver oil, witch hazel, bay rum, saltpeter, beta-naphtha, kerosene and bergamot oil. The evidence showed that there is no known drug or combination of drugs which will correct all causes of loss of hair; that the product in question when applied as directed would not reach the so-called hair root or papilla; and that the promoter's representation that the mixture would "bring in a real re-growth of hair" on bald-headed persons was false and fraudulent. As the defendant did not offer acceptable evidence to show why a fraud order should not be brought against him, such an order was issued on June 16, 1939.—*J. A. M. A.*, March 23, 1940.

Misbranded "Patent Medicines."—The Bureau of Investigation of the American Medical Association reports that the following "patent medicines" have been the subject of prosecution by the Food and Drug Administration of the United States Department of Agriculture which enforces the Food, Drug and Cosmetic Act: *Bowman's Cramp and Diarrhea Mixture* (Bowman Bros. Drug Co., Canton, Ohio), chiefly alcohol, water, chloroform, menthol and a morphine-bearing drug. *Bromo Sed and Somno Sed* (Roche, Renaud Pharmaceutical Co., Inc., Fairhaven, Mass.), less than the 80 grains of strontium bromide and 2 grains of phenobarbital per ounce that the product was falsely labeled to contain. *Edwenil* (Spicer & Co., Glendale, Calif.), essentially magnesium and nitrogenous compounds in a solution of common salt, with small amounts of carbolic acid and silica. *Elmi Electro Mineralized Water* (Electro Mineral Co., Detroit), an artificially prepared mineral water containing approximately 0.7 per cent of Glauber's salt, a small quantity of alkali and negligible amounts of other mineral substances. *Hytest Cold Capsules* (International Drug Sales Co., Denver), in which no acetanilid was present, though the label claimed 1½ grains of it per capsule. *Sexol Tablets* (Erie Laboratories, Cleveland), essentially iron phosphate, talc, plant extractives and an alkaloid.—*J. A. M. A.*, March 23, 1940.

S. S. Certified and Silver Seal Treatments.—The Bureau of Investigation of the American Medical Association reports that a concern doing business from Carthage and Joplin, Mo., under the names Silver Seal Company and Quickade Company, and their officers and agents as such, were debarred from the mails by a Post Office fraud order on Dec. 12,

1938. The moving spirit in the enterprise was a Maynard L. Durham. He claimed that his "S. S. Certified Treatment" "moved many stubborn, exceptional delays quickly." Altogether there were three preparations, "S. S. Certified," "S. S. Certified Special" and "S. S. Certified Guaranteed." The promoter admitted that all three of them were made from the same formula, which was: Ergotin, 1 gr.; extract cotton root, 1 gr.; extract black hellebore, 1 gr.; aloes, 1 gr.; ferrous sulfate, 1 gr.; oil of savin, ¼ min. On Aug. 17, 1937, the Federal Trade Commission announced that it had ordered the Silver Seal Company of Carthage, Mo., to cease making unwarranted claims for its "Silver Seal Treatments," apparently another name for the ones described above.—*J. A. M. A.*, March 30, 1940.

Evon and Murvel Tablets.—The Bureau of Investigation reports that from Springfield, Mo., one Floyd German advertised and sold through the mails a number of preparations, apparently of varying strengths, for "delayed menstruation," including "Evons No. 1" (a combination of Ext. of Cotton Root Bark ½ gr., Black Hellebore ½ gr., Ferrous Sulfate Exsiccated, Powdered Ginger and Aloes, Oils of Tansy, Savin and Pennyroyal Each ⅛ minim); "Murvel Special Compound Tablet" (containing Ergotin [Bonjean] 1 gr., Ext. Cottonroot bark 1 gr., Aloe 1 gr., Ferrous Sulfate, exsiccated 1 gr., Oil Savin q. s.); "Evons No. 2 (Murvey Super 'X' Compound Tablets)" (a combination of Ferrous Sulfate 1 gr., Aloes 1 gr., Ergotin 1 gr., P. E. Cotton Root 1 gr., P. E. Black Hellebore 1 gr., and Oil Savin q. s.). German claimed, among other things, that "Evons Treatments are the peak of perfection, possessing the very latest improvements in every way . . . can be taken without fear of bad after effects, perfectly safe, harmless . . ." The expert medical testimony introduced at the hearing of this case brought out that abnormal delay in menstruation may be due to any one of a number of conditions, and that, regardless of the origin of delayed menstruation it is obvious that no one treatment, even from scientific sources, could correct all cases of this disorder, or even a considerable percentage of them. The Post Office Department found the business to be a scheme for obtaining money through the mails by means of false and fraudulent pretenses, representations and promises and a fraud order was issued against it on Dec. 28, 1938.—*J. A. M. A.*, March 30, 1940.

D. D. Strength Favorite Regulators and Two Other C. O. Myers "Cures."—The Bureau of Investigation reports that from Kansas City, Mo., a C. O. Myers operated, under the trade names of Myco Company and Myces Company, a mail order business selling nostrums for delayed menstruation, hemorrhoids and premature ejaculation. "D. D. Strength Favorite Regulators" are recommended for "Irregular, Suppressed, Overdue or Delayed Monthly Periods from unnatural causes or from irregular, delayed, painful or profuse flow. . . " Also "for extra stubborn cases our Duo-Regulators are well recommended by many ladies who used them with good results." "D. D. Strength Favorite Regulators" were reported by government chemists to consist of: Extract cotton root 1 gr., ferrous sulfate exsic. 1 gr., aloe 1 gr., ergotin bonjean P. T. 1 gr., ext. black hellebore 1 gr., oil savin ¼ gr. It was brought out in the memorandum of the Post Office Department that there are no known drugs which, taken by mouth, will produce the ovulation necessary to menstruation if endocrine dysfunction is present. Myers' "Triple Treatment" was claimed to be "a complete pile relief . . ." The government chemists reported on the treatment as follows: "Triapila consists essentially of oxyquinoline sulfate and anesthesin incorporated in a base of petrolatum with ephedrine. Triapila Tablets: Unable to detect anything other than milk sugar, starch and acid soluble material. Lax-A-Wafers: Consist essentially of phenolphthalein." Medical testimony showed that these preparations did not constitute an effective remedy or cure for any form of piles, since they could not remove or beneficially affect all the causative factors. Myers' treatment for premature ejaculation was "Pro-Long-Zit." According to the government chemists it consisted essentially of quinine urea hydrochloride incorporated in a cold cream base with 14.47 per cent water and perfume. Because of the various misrepresentations made for Myers' products, a fraud order was issued Sept. 20, 1938, against the man, also covering the names of his Myco Company and Myces Company. Back in September 1933 the Federal Trade Commission announced that it had prevailed on C. O. Myers to sign a stipulation promising to cease and desist from making "false or misleading" representations for his "Favorite Regulator;" and from "describing, labeling, branding or designating same either inferentially or otherwise as an effective contraceptive or abortifacient."—*J. A. M. A.* March 30, 1940.

Misbranded "Patent Medicines."—The Bureau of Investigation of the American Medical Association reports that the following "patent medicines" have been the subject of prosecution by the Food and Drug Administration of the United States Department of Agriculture which enforces the Food, Drug and Cosmetic Act: *Bloodine* (American Drug Syndicate, American Proprietary Syndicate [or Co.], Malden, Mass., and Bloodine Co., Boston), chiefly alcohol (22.1 per cent by volume), sugar and water, with a small amount of tartaric acid and a trace of an antimony compound. *Cre-O-Tol* (American Drug Syndicate, and American Proprietary Syndicate [or Co.], Malden, Mass.), containing soap, water, carbolic acid and neutral oils of coal tar. *Hy-Lo-Ex* (Medway Laboratories, Inc., West Medway, Mass.), essentially sodium biphosphate, sugar, water and oil of lemon. *Koch's (Dr.) Camph-O-Lin* (Koch Products Co., Winona, Minn.), essentially turpentine, water and small amounts of camphor, soap, ammonia and ammonium chloride. *Koch's (Dr.) Inhalo* (Koch Products Co., Winona, Minn.), essentially volatile oils including eucalyptol and menthol (32.5 per cent by volume), alcohol (53.4 per cent by volume) and water. *Koch's (Dr.) Stick Salve* (Koch Products Co., Winona, Minn.), essentially a small amount of zinc oxide in a base containing resin and beeswax. *Must-a-rub* (American Proprietary Syndicate, American Drug Sales Co. and New England Laboratory Co., Malden, Mass.), an ointment consisting of petrolatum, paraffin, a trace of an iodine compound and essential oils including mustard, wintergreen and camphor. *Prunitone Liver Pills* (American Proprietary Syndicate and American Drug Sales Co., Malden, Mass., and Prunitone Laboratories, Boston), sugar-coated pills, containing aloes, podophyllum, phenolphthalein, strychnine and brucine. *Strasphene* (Emdee Research Laboratories, Oakland, Calif.), acetophenetidin found, though presence and amount of this drug were not stated on the trade package as required by law.—*J. A. M. A.*, March 30, 1940.

A "Female Regulator" Business Declared Fraudulent.—The Bureau of Investigation of the American Medical Association reports that a treatment known under the rather descriptive name "Relief Compound or Female Regulators" was sold through the mails by one Irving Safronski (or Sofronski) and his wife Ethel, of Philadelphia, who used the pretentious trade style "Ron-Al Medicine Co.," and "Dr. Ron-Al Medicine Co." Investigation by the Post Office Department revealed that, though these individuals claimed to be registered pharmacists, neither of them had any medical training, nor were any physicians

connected with the enterprise. The compound consisted of white-coated tablets, which the government chemists reported to contain oil of savin, dried iron sulfate (about 1 grain per tablet), aloe, ergotin and extracts of cotton root bark and black hellebore. The Solicitor's memorandum to the Postmaster General cited expert medical testimony showing that lapsed, delayed or absent menstruation may be due to any one of various disorders. The memorandum also brought out that to treat effectively and, when possible, to overcome the complex physiologic factors to which amenorrhea and dysmenorrhea are due, careful physical examination is necessary to determine the basic cause of the condition, following which specific treatment adapted to the case is essential. It was shown that Safronski's "Relief Compound or Female Regulators" would act essentially as a laxative, as a slight irritant to the kidneys and as a mild stimulant to the muscles of the uterus but would be of no benefit either to disordered endocrine glands or to any other conditions responsible for menstrual troubles. Altogether, the Post Office Department found the Safronski business to be a scheme to defraud by mail and on June 10, 1939, a fraud order was issued against Ron-Al Medicine Co., Dr. Ron-Al Medicine Co. and their officers and agents as such, debarring them from further use of the mails.—*J. A. M. A.*, Jan. 13, 1940.

Comparative Value of Serum Therapy and Chemotherapy in Pneumococcic Pneumonia.—A detailed discussion of the value of the various types of pneumococcus serums in comparison with the value of sulfapyridine in the treatment of pneumococcic pneumonia. The clinical evidence furnished thus far establishes the efficacy of both serotherapy and the new chemotherapy in lowering the death rate from pneumococcic pneumonia. The relative value of the two methods and the indications for their employment, as well as for the combined use of the two, await further clinical studies.—*J. A. M. A.*, Feb. 24, 1940.

Norman Baker Convicted.—On January 23 a jury found Norman Baker, notorious promoter of a cancer cure, guilty of using the United States mails to defraud. This is the same Norman Baker who promoted the old Hoxsey "cancer cure," and who was ordered off the air with his station at Muscatine, Iowa, June 1931, following publication of an article in *The Journal of the A. M. A.*, exposing the manner in which that station was being used to entice sufferers from cancer to Muscatine. He sued the American Medical Association for libel and lost the verdict when the Association fought him in the courts. Eventually Baker went to Arkansas and took over a defunct springs resort, where he set up an institution for the treatment of cancer. In his trial the chief defense offered included statements from some persons who testified that he and his associates had acted in good faith in advertising cures for cancer and other diseases through the mails and over the radio. Among the experts who testified on behalf of established medical science were Dr. Francis Carter Wood, of New York, and Dr. Max Cutler, of Chicago. Following conviction by the jury, Baker was sentenced to four years' incarceration and fined $4,000. A motion for a new trial was denied.—*J. A. M. A.*, Feb. 3, 1940.

NEWS

The National Negro Medical Association will meet August 11-16, in Houston, informs the Houston *Chronicle*, the host being the Lone Star State Medical Dental and Pharmaceutical Association of which Dr. Thelma Patton-Law of Houston is president. The National Negro Hospital Association will hold a meeting in Houston at the same time. General headquarters will be at the Phillis Wheatley High School.

Dr. E. W. Bertner of Houston, past-president of the State Medical Association of Texas, has been designated to extend greetings to the Negro Association as a representative of the American Medical Association.

Wichita General Hospital Staff elected the following officers to serve during 1940-1941, advises the Wichita Falls *Banner:* President, Dr. O. T. Kimbrough; vice-president, Dr. J. A. Little; and secretary, Dr. George Siebold. Executive Committee members appointed by President Kimbrough include Drs. J. A. Heymann, A. W. Pierce and William L. Powers.

Baylor Postgraduate Medical Course.—The postgraduate course in obstetrics and pediatrics conducted by Baylor University College of Medicine, Dallas, during May and June, under the sponsorship of the Texas State Department of Health, in cooperation with the Committee on Postgraduate Education of the State Medical Association was attended by the following Texas physicians: Drs. E. W. Anderson, Huntsville; T. J. Barb, Roby; Sam D. Barclay, Crockett; Alfred J. Brohn, Columbus; J. Carrol Clement, Diboll; R. W. Cozby, Grand Saline; H. LaForge, George West; J. E. Gower, Spearman; Robert N. Graham, Del Rio; B. A. Kirkpatrick, Taylor; S. W. Mantzel, Giddings; Hugh Parchman, Overton; Willa Louise Pierce, Aubrey; A. N. Pike, Iredell; T. J. Shoemaker, Fort Worth; William J. Swann, Sterling City; John R. Turner, Brownfield; A. B. Watkins, Seagoville; Edward T. Wolf, Houston, and J. L. Wright, Clarksville.

Lectures and clinics were held in the Medical College, Baylor Hospital, Bradford Memorial Hospital and Parkland Hospital, informs the Dallas *Journal.*

University of Texas Postgraduate Medical Course, at Galveston was attended by the following Texas physicians, advises the Galveston *News*: Drs. W. S. Malloy, Ysleta; John B. Bennett, Lamesa; L. K. Ory, Comanche; R. C. Felts, San Saba; C. M. Carrithers, Alice; George E. Bennack, Raymondville; J. J. Hopkins, Brookshire; Charles R. Haley, San Augustine; Peyton C. Clements, Lufkin; T. M. Hall, Gatesville; Ernest R. McCauley, Moody; M. L. Stubblefield, Gorman; W. S. Caldwell, Kilgore; B. E. Pickett, Carrizo Springs; A. P. Utterback, Brackettville; F. G. Evans, Grand Saline; K. J. Scott, Pharr; F. W. Farley, San Saba; John C. Galbreath, Alvin, and C. C. Cogburn, Eastland.

Teachers included all members of the clinical staff, classes being held largely in the out-patient clinic with ward rounds in the Children's Hospital and the John Sealy Hospital. The course began May 20, and concluded June 15. It was conducted under the sponsorship of the Texas State Department of Health in coöperation with the Committee on Postgraduate Education of the State Medical Association. While the intensive course was conducted principally by the departments of obstetrics and pediatrics, other departments of the teaching staff collaborated in the lectures, conferences, clinics, and ward rounds.

The Post Graduate Medical Assembly of South Texas announces the following guest speakers for the 1940 fall program informs the Houston *Chronicle:*

Dr. Henry K. Mohler, Philadelphia, Internal Medicine.

Dr. George Morris Piersol, Philadelphia, Internal Medicine.

Dr. Charles F. McKhann, Boston, Pediatrics.

Dr. Charles C. Dennie, Kansas City, Missouri, Dermatology.

Dr. Milton B. Cohen, Cleveland, Allergy.

Dr. Claude C. Coleman, Richmond, Virginia, Surgery.
Dr. Harvey B. Stone, Baltimore, Maryland Surgery.
Dr. B. R. Kirklin, Rochester, Minnesota, Roentgenology and Radiology.
Dr. Howard C. Taylor, Jr., Philadelphia, Obstetrics and Gynecology.
Dr. Robert A. Ross, Durham, North Carolina, Obstetrics and Gynecology.
Dr. David M. Davis, Philadelphia, Urology.
Dr. Sanford R. Gifford, Chicago, Ophthalmology.
Dr. John Dunnington, New York, Ophthalmology.
Dr. W. Likely Simpson, Memphis, Tennessee, Otolaryngology.
Dr. James B. Costen, St. Louis, Missouri, Otolaryngology.
Dr. Floyd T. Romberger, Lafayette, Indiana, Anesthesia.

John Sealy Hospital Service Plan.—The Austin *Texan* announces President Homer P. Rainey of the University of Texas, Austin, and Dr. John W. Spies, Dean, University of Texas School of Medicine, Galveston, have revealed plans for enlarging the field of John Sealy Hospital to service of a statewide nature, thereby providing a wider range of clinical material for medical study than the City of Galveston now affords. The first step would be an enlargement of research study. In addition to the diagnostic and venereal disease clinics recently established, it is expected to establish a cancer clinic, tuberculosis research, diet and nutrition studies, the study of tropical diseases, and research in diseases important to the Southwest, such as undulant fever, typhus, relapsing fever, rabbit fever, skin cancer, and rheumatic fever. It was pointed out that there are in Texas today about one hundred fabulously wealthy men who are looking for some worthy enterprise to endow, and that such endowments would be sought.

State Tuberculosis Sanatorium Motion Picture.—The announcement is made of the recent completion of a 16 mm. sound motion picture film, showing the physical and clinical aspects of the State Tuberculosis Sanatorium for presentation before physicians and various health groups in the tuberculosis education program of the institution. The picture shows the entire physical plant of the hospital and depicts the daily life of patients in the sanatorium. About one-third of the film is devoted to the 187 bed children's hospital at the sanatorium and the new methods in use in treating tuberculosis. The film is 1,200 feet in length and takes about thirty-five minutes for showing. Requests for dates of showing should be made to Dr. J. B. McKnight, superintendent, State Tuberculosis Sanatorium, Sanatorium, Texas.

First Texas Chemical Manufacturing Company, Dallas, was host to the graduating class of Baylor University, College of Medicine, at their annual luncheon held at the Baker Hotel, Dallas, May 25. Addresses were made by Dr. Humphrey Lee, president, Southern Methodist University, Dr. Holman Taylor, secretary, State Medical Association, and Dr. Tate Miller, Dallas. Dr. J. V. Goode was presented with the *Annual,* official publication of the University, by Dr. C. E. Carmack, who was presented by Dr. E. E. Mason, class president.

Venereal Disease Information, a monthly digest of papers on the diagnosis, treatment, pathology, laboratory research and public health aspects of venereal disease, ranks today as the Government's "best seller," with the highest paid circulation of any Federal publication. It is available at 50 cents per year to all physicians. New subscribers to *Venereal Disease Information* may receive on request any or all of the following documents: No. 5, Diagnosis of Syphilis by the General Practitioner (1938); No. 6, Management of Syphilis in General Practice (1938); No. 7, Syphilis in Mother and Child (1940); No. 8, The Gonococcus and Gonococcal Infections (1939); No. 9, The Serodiagnosis of Syphilis, Part II, Revised Technics (1939); No. 10, Control of the Venereal Diseases in the United States: Present and Future Plans (1939).

Orders should be directed to the Superintendent of Documents, Government Printing Office, Washington, D. C. The subscription fee is 50 cents per year in check or money order, not stamps.

The American College of Physicians will hold its twenty-fifth annual session April 21-25, 1941, in Boston, with general headquarters at the Statler Hotel. Dr. James D. Bruce, Ann Arbor, Michigan, president of the College, will have charge of the program of the general scientific sessions. Dr. William B. Breed, Boston, general chairman of the session, will be in charge of the program of clinics and demonstrations in the hospitals and medical schools and of the program of panel and round table discussions to be conducted at the headquarters.

PERSONALS

Dr. R. L. Alexander, Spur, has recently returned from postgraduate study in Chicago, informs the Jayton *Chronicle.*

Dr. J. W. E. H. Beck, for the past three years director of local health services for the State Health Department, resigned June 15 to return to private practice in his home town DeKalb, informs the Austin *Statesman.* Dr. Beck has been connected with the State Health Department for four years, the first being director of maternal and child health. During his period of service with the Department, local health services have increased from twenty-one to fifty-two counties. Prior to his connection with the State Health Department. Dr. Beck served for seven years in the Texas Senate, where he was a leader and advocate of public health legislation, and was the author of bills that are now important health laws in the Texas statutes. He had previously practiced medicine for thirty-five years in DeKalb. His services will be greatly missed as a public health official.

Dr. John M. Hooper recently succeeded Dr. J. J. Croley as director of the McKinney-Collin County Health Unit, advises the McKinney *Courier-Gazette.*

Dr. Stanley Cox, Groesbeck, has returned from postgraduate study in Chicago, advises the Groesbeck *Journal.*

Dr. Peyton R. Denman, Houston, sustained a compound fracture of the right arm below the elbow and a fracture of three ribs in an automobile accident while attending the State Medical Association meeting in Dallas, informs the Lufkin *News.*

Dr. W. E. Whigham, McAllen, has returned from postgraduate work in Philadelphia, states the McAllen *Press.*

Dr. Morris Fishbein, Chicago, editor of *The Journal of the American Medical Association,* addressed the Knife and Fork Club, Fort Worth, recently.

BIRTHS

To Dr. and Mrs. T. G. Blocker, Jr., Galveston, a daughter, Anne Singleton, May 4, 1940.

To Dr. and Mrs. Edwin L. Rippy, Dallas, a son, Robert Edwin, April 24, 1940.

To Dr. and Mrs. H. T. Jackson, Fort Worth, a son, Donald J., May 1, 1940.

To Dr. and Mrs. H. O. Deaton, Fort Worth, a son, Burrel, May 25, 1940.

MARRIAGES

Dr. Robert Hardie Engledow of Anahuac, to Miss Sarah Thurman, Commerce, June 8, 1940.

Dr. George Calvin Bryant, Jr., to Miss Novella Bernice Dodson, both of Dallas, May 20, 1940.

SOCIETY NEWS

Anderson-Houston-Leon Counties Society

June 4, 1940

(Reported by A. L. Hathcock, Councilor)

The Present Status of Transurethral Resection—Edward White, Dallas.

Cancer of the Breast—Frank Selecman, Dallas.

Anderson-Houston-Leon Counties Medical Society held a banquet meeting June 4, at the Blue Moon Inn, Palestine. A business session was held and the scientific program as given above was carried out. The Society adjourned until September 3.

Baylor-Knox-Haskell Counties Society

May 21, 1940

(Reported by T. W. Williams, Secretary)

Baylor-Knox-Haskell Counties Medical Society held a dinner meeting, May 21, at the Home Economics Cottage, Munday, with thirteen members of the Society, eight members of the Auxiliary, and two guests present.

After dinner, Miss Martha Crenshaw gave a review of the book, "Captain Hornblower."

T. S. Edwards, delegate to the State Medical Association, gave a report of the meeting in Dallas, just concluded.

Bexar County Society

March 21, 1940

Bexar County Medical Society met March 21, in the Medical Library Building, San Antonio, with ninety-five members and visitors present. Herbert Hill, president, presided.

John M. Burleson discussed the Wagner bill pending in the U. S. Congress, and the probable effects of such legislation on the medical profession, nationally and locally, if it were enacted. Dr. Burleson's discussion was clear, concise and emphatic.

Charles S. Venable spoke on the effect of the Wagner bill on the individual physician. He referred to the prosecution of the American Medical Association by the United States Department of Justice last year, and described it as only another effort to effect the scheme of socialized medicine and brand the medical profession as a trade union. He emphasized the work of the National Physicians Committee, which is fighting the effects of propaganda distributed through every medium of present day communication. He urged that the work of the National Physicians Committee be supported by all individual physicians if the profession is to escape eventual dissolution.

A. A. Ross, Lockhart, a member of the National Committee and a past-president of the State Medical Association, further discussed the bill and expressed his whole-hearted approval of the work of the National Physicians Committee.

W. B. Russ stated that the whole idea of the present Federal program is to silence the American Medical Association. He pointed out that the operation of similar medical programs in Europe where state class practice exists is no recommendation for their success in a democratic nation such as ours. He urged that the Society encourage the National Physicians Committee by something more than talk, that the sum of $250 be donated from the treasury of the Society. The motion of Dr. Russ was seconded by Thomas Dorbandt.

Dudley Jackson asked whether or not the motion might not be premature and the donation would not really be a contribution to the Republican political campaign. Careful consideration of all factors was asked.

C. Ferd. Lehmann stated the reasons why the American Medical Association could not fight the propaganda directed against the medical profession, which fact called for the creation of the National Physicians Committee, and seconded the motion of Dr. Russ.

John H. Burleson again emphasized the need of individual effort and the work of organized medicine to spread intelligent information.

J. A. Watts asked in regard to the reserves held by the State Association and the American Medical Association which could be used in the fight, which question was answered by Drs. Burleson and Venable. The question was then called for and put by President Hill and carried by 52 ayes and 5 nays.

President Hill presented a proposed amendment to the by-laws as a means of increasing interest and attendance on meetings of the Society, which was discussed by E. V. DePew, R. E. Parrish, Lloyd I. Ross, Dudley Jackson, and O. J. Potthast. The Society voted to eliminate summer meetings.

A communication from Dr. Frank H. Lancaster was read, following which it was voted to instruct the delegates from Bexar County to vote in favor of creating a new Section on Pediatrics of the State Medical Association.

Resolutions of sympathy were adopted on the death of the wife of Dr. W. H. Hargis of San Antonio.

April 4, 1940

The Flexible Gastroscope—M. O. Rouse and C. O. Patterson, Dallas.

Chemotherapy, Including the Newer Modifications of Sulfanilamide—W. G. Reddick, Dallas.

Bexar County Medical Society met April 4, in the Medical Library Building, San Antonio, with 150 members and ten visitors present. Herbert Hill, president, presided. W. H. Coole, program chairman for the evening, presented the scientific program as given above.

The Flexible Gastroscope (M. O. Rouse and C. O. Patterson).—The instrument was demonstrated. Medication before examination consists of one-half grain codein and the application of 2 per cent local anesthesia to the pharynx. The patient comes without breakfast and following the examination can go to work. Contraindications are aneurysm, esophageal varices and similar lesions. The instrument is used to study the gastric mucosa, ulcers of the stomach, to investigate the possibility of malignancy, and to study causes of gastric massive hemorrhage. It does not help much in determining operability. Biopsy cannot be made through the instrument. Early lesions are discovered only by early examination. Gastroscopy should be done in men in the cancer age who lose their appetites. Positive findings are conclusive; negative are not. There are certain blind areas. A keen color perception is needed. Stomach lesions may result from disease in other organs; the internist rather than the gastroscopist must interpret the results. There have been more than 22,000 examinations made without mortality.

Henry M. Leopold in discussing the paper stated that the gastroscope will be more useful when pictures can be made through the instrument.

E. V. DePew stated that it should be an aid to the internist in studying defects in the x-ray examination.

Merton M. Minter stated that he had seen a case of stomach ulcer visualized through the gastroscope which had been missed by several x-ray examinations. He had also seen a case of urticaria of the gastric mucosa.

David R. Sacks expressed preference for the therapeutic tests. Patients taking the gastroscope do not seem very happy. It should help to classify the gastric lesions now obscure.

Ervin F. Lyons, Jr. stated that from a study of the literature it seems to be a valuable aid to be used in conjunction with the x-ray. It should be most helpful in the diagnosis of gastritis. X-ray examina-

tion will show only the hypertrophic type. Gastroscopy should also be valuable in finding superficial ulcerations and in symptomless gastric hemorrhage.

Dr. Patterson, in closing the discussion, stated that he had made some pictures through the gastroscope but they were not good. Three or four patients can be examined with the instrument in two or three hours. Many patients undergo gastroscopy well. Considerable effort is made not to hurt patients in the examination and they are very appreciative.

CHEMOTHERAPY, INCLUDING THE NEWER MODIFICATIONS OF SULFANILAMIDE (W. G. Reddick).—Accurate bacteriologic study of disease is essential to the use of intelligent chemotherapy. Hemolytic streptococcal infections in the nose and throat do not respond very well; in some no results are obtained but results are better than with previous methods. Otitis media responds well. Recovery occurred in one case of streptococcic meningitis treated by the author. Some recoveries have occurred in cases of streptococcic septicemia. The results in erysipelas have been uniformly good. Some cases of scarlet fever have responded, others do not; complications are less frequent.

No benefit is obtained from sulfapyridine, sulfanilamide, or sulfathiazols in the treatment of subacute bacterial endocarditis caused by the non-hemolytic streptococci. Even with heparin the usual course has been run, according to C. Keefer. Without valvular lesions recovery occurs without drugs. Chemotherapy alone is not adequate for gonococcal infections. Results with sulfanilamide are excellent in gonococcal arthritis. One case with a positive blood culture responded temporarily to sulfapyridine.

Colon bacillus and streptococcic pyelitis have been cured with chemotherapy. Six cases of meningococcus meningitis have been cured by sulfanilamide. The ideal treatment is to combine the serum and drug. Brucella infections have given some response.

About 450 cases of pneumococcal infections have been treated. One group (1937-1939) of ninety-four cases received sulfanilamide alone with 19 per cent mortality. Sulfanilamide and neoprontosil should not be used in pneumococcus infections. In 1938-1939, the essayist had used sulfapyridine in 100 cases with seven deaths, three of the fatal cases having been in the hospital less than twenty-four hours.

In 1939-1940 with sulfapyridine, serums, and thiazols 205 patients have been treated with thirteen deaths or 6 per cent; only six patients in this group received serum. Seventy-five patients have taken sulfapyridine with two deaths. Thirty-six patients received sulfathiazol and sulfamethylthiazol. Six of the latter had to be given serum and one of the former. There is no particular difference between thiazol and methylthiazol. These two agents are not as valuable in pneumococcal infections as sulfapyridine. In four or five failures with these drugs, sulfapyridine has been successful.

In fifteen cases of pneumococcal meningitis only one has been cured. Chemotherapy alone should never be relied upon and all foci should be removed at the earliest possible moment.

Sulfapyridine gave cures in four of six positive blood culture cases of staphylococcic infections. The thiazols cured four cases of staphylococcic blood infection.

In general it is not logical to use sulfanilamide in mild cases to produce sulfanilamide intoxication. Only patients with serious diseases should receive heavy doses. When patients are given large amounts of the drug they should be hospitalized to check on blood levels. Sulfapyridine should be given intravenously if necessary, five grams twice, twelve hours apart, in saline or 5 per cent glucose.

Chemotherapeutic agents will not clear up local collections of pus as empyema, abscess, or sinusitis. The beneficial effect of the drugs results from slowing down of bacterial action, which permits the patient's immunity to rise so specific antibodies should also be used with the drugs.

Henry N. Leopold, in discussing the paper, stated that he had never heard a more masterful discussion of sulfanilamide compounds. Heparin and cevitamic acid and sulfapyridine may cure subacute bacterial endocarditis. Soda should be given to prevent a block in the kidneys.

Herbert Hill stated that chemotherapy is not a panacea. He asked Dr. Reddick to state his average doses.

Merton M. Minter asked if children should have proportionately more of these drugs per pound of body weight.

C. S. Venable asked if sulfanilamide is of value in dirty compound fractures. He further asked if the action of sulfanilamide sewed up in wounds is local or systemic.

F. W. Steinberg stated that a liquid was found last winter in which sulfanilamide could be dissolved in from 2.3 to 2.7 per cent, called elixir of sulfanilamide and he thought that spraying liquid saline into the throat will increase the concentration of sulfanilamide.

Dr. Reddick, in closing the discussion, stated that he gives sodium bicarbonate grain for grain with sulfanilamide to prevent precipitation of the saturated drug in the kidneys. Sulfapyridine given early in pneumonia prevents the necessity of typing in one-third of the cases seen later. Typing is essential. The average initial dose of sulfapyridine is from 30 to 60 grains, following which from 15 to 22 grains is given every four hours. The thiazols are more rapidly absorbed and executed; therefore, the dose is larger. These drugs are of little value in chronic infection. He stated that he knew nothing about the doses in children or about the use of sulfanilamide in wounds; that its latter use did not seem logical to him.

Other Proceedings.—The board of directors requested that if any money is to be appropriated by the Society they be asked to investigate before it is done.

A report of the board of directors was given, proposing an amendment to the by-laws regarding membership and leave of absence from the Society.

President Hill asked the board of directors to pass on the appropriation of $250 voted by the Society at its March 28 meeting to the National Physicians Committee to be used in an educational campaign. The board approved this appropriation by unanimous vote.

President Hill reported that a number of food poisoning cases had been reported from the eating of cocoanuts and asked that any cases of food poisoning be reported to the health department.

Clay-Montague-Wise Counties Society

April 25, 1940

(Reported by W. T. Inabnett, Secretary)

Injection Treatment of Hernia, Cysts and Other Conditions—Penn Riddle, Dallas.
External Diseases of the Eye—R. H. Gough, Fort Worth.

Clay-Montague-Wise Counties Medical Society members and six visitors were guests of Dr. and Mrs. T. G. Rogers for dinner at Rogers Hall in Decatur on April 25. The scientific program as given above was carried out.

Cooke County Society

May 13, 1940

(Reported by Houston H. Terry, Secretary)

Renal Infections—Jo C. Alexander, Dallas.
Pneumonia—Ben R. Buford, Dallas.

Cooke County Medical Society met May 13, with twenty-one members present. The scientific program as given above was carried out.

Dallas County Society

April 11, 1940

(Reported by W. W. Fowler, Secretary)

Lowering the Mortality in Breech Delivery—Wayne T. Robinson, Dallas.
X-ray Diagnosis of Diseases of the Esophagus (lantern slides)—Davis Spangler, Dallas.
Cyanate Therapy in Hypertension (lantern slides)—S. A. Shelburne and C. A. Ault, Dallas.
Hypopharyngeal Diverticulectomy (lantern slides)—A. B. Small, Dallas.
Squamous Cell Carcinoma of the Anus and Rectum—Jack G. Kerr, Dallas.

Dallas County Medical Society met April 11, 1940, in the Medical Arts Auditorium, Dallas, with sixty-six members present. Curtice Rosser, president, presided and the scientific program as given above was carried out.

The paper of Dr. Spangler was discussed by G. E. Brereton. The paper of Drs. Shelburne and Ault was discussed by R. M. Barton, Ben R. Buford, and S. A. Shelburne.

New Members.—The following were elected to membership on application: Charles A. Ault, Jr., Wilbord L. Cooper, Frank W. Kelley, George E. Peacock, and William D. Tigertt.

Other Proceedings.—John L. Goforth, chairman of the Health Advisory Board of the City of Dallas, gave a report of the activities of the board, outlining the services that are provided by the Health Department.

April 25, 1940

Common Foot Disorders (lantern slides)—Wilhelm Zuelzer, Dallas.
Some New Ideas in Preventive Pediatrics—John Dunlap, Dallas.
Factors Contributing to Error in Diagnosis in Gynecology—M. S. Seely, Dallas.
The Intravenous Use of Concentrated Plasma Prepared by the Absorption-Desiccation Method—Joseph M. Hill, Dallas.
New Concepts of the Etiology of Hemolytic Anemia and Their Relation to Diagnosis—W. D. Tigertt, Dallas.

Dallas County Medical Society met April 25, 1940, in the Medical Arts Auditorium, Dallas with fifty-six members present. Curtice Rosser, president, presided, and the scientific program as given above was carried out.

The paper of Dr. Hill was discussed by M. S. Seely. The presentation of Dr. Zuelzer was discussed by Ben L. Schoolfield.

New Members.—The following were elected to membership on application: S. Roland Brown, B. A. Mikulencak, H. B. Jablow, and F. R. Copeland.

May 9, 1940

Analysis of Abortions in Parkland Hospital for the Last Three Years (lantern slides—Julius McIver and J. C. Rucker, Dallas.
Repair of Cystocele, Rectocele and Prolapse of the Uterus—G. F. Goff, Dallas.
Incidence of Tubal Pregnancy in the Negro—Unruptured Sac Specimen (lantern slides)—Dexter H. Hardin, Dallas.
Hyoid Bursitis (lantern slides)—L. A. Nelson, Dallas.
The Glands of the Female Urethra (lantern slides—George T. Caldwell, Dallas.
General Systemic Infections as a Sequence to the Paranasal Sinuses—O. M. Marchman, Dallas.
The Educational Needs of Health Officers—J. W. Bass, Dallas.

Dallas County Medical Society met May 9, 1940, in the Medical Arts Auditorium, Dallas, with seventy members present. Curtice Rosser, president, presided and the scientific program as given above was carried out.

New Members.—The following were elected to membership on application: Mack F. Bowyer, Charles N. LaDue and Cecil I. Stell.

Denton County Society

June 6, 1940

Denton County Medical Society met June 6, with twelve members present. A. E. Wyss, president, presided. The program consisted of informal discussion of cases.

A donation of $25 was voted by the Society for coöperation with the National Physicians Committee for medical service.

It was voted to discontinue meetings during the summer, the next meeting of the Society to be September 5.

El Paso County Society

May 13, 1940

(Reported by M. P. Spearman)

Dissecting Aneurysm of Aorta—G. Werley, El Paso.
La Peyronie's Disease—D. von Briesen, El Paso.

El Paso County Medical Society met May 13, in the tea room of the Hotel Cortez, El Paso, and the scientific program as given above was carried out.

The paper of Dr. Werley was discussed by W. W. Waite, and the paper of Dr. von Briesen was discussed by W. R. Curtis.

May 27, 1940

El Paso County Medical Society held its semi-annual business meeting May 27, in the tea room of the Hotel Cortez, El Paso. This was the last meeting before adjournment for the summer.

Grayson County Society

May 21, 1940

Grayson County Medical Society met May 21, at the Hotel Grayson, Sherman.

A committee to consider fees to be charged by physicians for services rendered clients of the Farm Security Administration was appointed by J. H. Carraway, as follows: A. L. Ridings, W. I. Southerland, G. W. Greer, and W. A. Lee. The plan is for each physician at the end of the month to present his statement to the county supervisor, who in turn will present the bills to the committee for approval. A plan for payment of the bills is to be worked out soon.

A report of the State Medical Association meeting held at Dallas recently was given.

Hale-Floyd-Briscoe-Swisher Counties Society

June 11, 1940

(Reported by A. D. Ellsworth, Secretary)

Digitalis and Mercury in Congestive Heart Failure—D. M. Marcley, Amarillo.
Gastric Malignancy—A. B. Goldston, Amarillo.

Hale-Floyd-Briscoe-Swisher Counties Medical Society met June 11, and the scientific program as given above was carried out.

A. D. Ellsworth resigned as secretary and P. C. Anders was elected to fill the vacancy.

Harris County Society

March 13, 1940

(Reported by Hugh C. Welsh, Secretary)

Space Occupying Lesions of the Spinal Canal—James Greenwood, Jr., Houston.
Acute Cholecystitis—J. G. Heard, Houston (Read by J. T. Billups).
Injuries of the Spine and Spinal Cord—Robert C. L. Robertson, Houston.

Harris County Medical Society met March 13, with forty-one members present. Alvis E. Greer, president, presided, and the scientific program as given above was carried out.

Space Occupying Lesions of the Spinal Canal (James Greenwood, Jr.)—

A. Hauser: I think that Dr. Greenwood has so well covered this subject there is nothing very much left to say. I do not think he over emphasized the recent discovery of protruded discs. Out of 500 cases, the actual per cent of relief was run up to 90 per cent. There is no question that we have now cleared up to a large extent the problem of sciatica. I believe this explains what we could not explain before, and in the future we will have a more definite idea of what it is. With reference to tumor syn-

dromes, I think it important to recall that the tumors in the lower region can produce nothing but pain. One does not suspect the tumor—there is practically no sign of one and some think it is a pelvic disease. The patient can not get relief with narcotics and he is suspected of being a neurotic. It is very difficult to diagnose these cases. We are indebted to Dr. Greenwood for this very interesting paper.

ACUTE CHOLECYSTITIS (J. G. Heard).—

J. Peyton Barnes: There is one thing I want to bring out and that is the use of the oblique incision. I find that it is very easy to close, especially if the patient is short and fat. I would also recommend the use of it if there is infection.

P. H. Scardino: This paper is bringing controversy to early operative procedures and late procedure.

INJURIES OF THE SPINE AND SPINAL CORD (Robert C. L. Robertson).—

F. Keith Bradford: Dr. Robertson has given a comprehensive review of the current opinions in regard to vertebral injuries damaging the neural structures within the spinal canal. Hemorrhage within the gray matter of the spinal cord is a frequent finding, as Dr. Robertson suggested, and may progress for several days after injury. In a case observed recently at autopsy this phenomenon accounted for diaphragmatic paralysis and death several days after an injury at the level of the seventh cervical vertebra.

I am in agreement with Coleman that the presence of a partial or complete block demonstrated by the Queckenstedt test is the prime consideration for operation. It is true that the prognosis of any complete lesion is exceedingly grave regardless of treatment, but the relief of a block favors cord recovery if irreversible changes have not occurred. When an incomplete lesion becomes progressive following injury, and is accompanied by a block, laminectomy is almost always indicated. Because of the high mortality in cervical cord injuries with or without laminectomy, this operation is not often indicated. Block is usually due to compression by vertebral or disc fragments, or to swelling of the spinal cord. Compression by hematoma is exceedingly rare.

The sensory level in a complete cord lesion is usually higher initially than it is several days later. This is due to the temporary physiological disturbance in the cord several segments higher than the site of injury. This lowering of the sensory level does not necessarily alter the prognosis.

Injury at the twelfth thoracic or first lumbar vertebra often gives an interesting neurological picture. At this level the tip of the spinal cord is surrounded by the upper nerves of the cauda equina. If all the neural structures are destroyed there is paralysis of all the lumbar and sacral nerves. However, due to the greater vulnerability of the tip of the spinal cord, there is often complete paralysis of the sacral nerves with preservation of function in the lumbar nerves. Complete paralysis of both lumbar and sacral nerves is often followed by recovery of function in the lumbar nerves with residual paralysis of the sacral nerves.

In conclusion, I wish to emphasize again a point which Dr. Robertson has stressed—that the immediate treatment of vertebral injuries depends directly upon the condition of the neural structures within the spinal cord.

A. Hauser: I would like to ask Dr. Robertson what his experience has been with concussion of the spinal cord—when this occurs, the patient recovers and one is apt not to know that it has occurred. It does not give us much autopsy material. I have read an abstract of an article on that.

J. A. Brown: I assisted Penfield in operating on a number of these patients. Those who had a complete transverse myelitis improved if he got to them within the first four hours. He thought that incising the cord prevented swelling, the swelling being due to edema. When we incised those cords, we practically never got any expansion of the cord. I might say, that of the myelitis group, practically none improved.

Dr. Robertson, closing: Concussion of the spinal cord is not acceptable as a diagnosis to some workers. Spiller in 1899 described a cat that was caught in a swinging door being immediately paralysed in the hind limbs. The cat was autopsied a few days later, never having regained any function in the hind limbs. He was unable to demonstrate any recognizable lesion in the cord of this animal even with the special stains. He considered this a case of spinal cord concussion. Dr. Casamajor and others have reported spinal cord concussion. Others deny the existence of spinal cord concussion; i. e., Coleman states it is doubtful if it even occurs.

March 20, 1940

Case Report of Pulmonary Syphilis—Y. C. Smith, Houston.
Treatment of Chronic Allergic and Infectious Sinusitis—Harris Hosen, Port Arthur.
Scalenus Neurocirculatory Compression—F. Keith Bradford, Houston.

Harris County Medical Society met March 20, with sixty-nine members present. J. Harolde Turner, vice-president, presided, and the scientific program as given above was carried out.

CASE REPORT OF PULMONARY SYPHILIS (Y. C. Smith).—

W. S. McDaniel: Dr. Smith is to be congratulated on his paper, and uncovering an unusual case. It will not be of any use to us in every day medicine but it reminds us that we are not always faced with just common things. The chief trouble now is a wrong diagnosis. A doctor with a narrow diagnostic horizon is limited. These rare cases prove to be of great interest. They give us renewed interest in our work and encourage us. In some cases it is impossible to find out whether it is syphilis of the lung—about the only way to find out is by an autopsy. (Dr. McDaniel showed slides and discussed them.) Dr. Greer says that fungus infection of the lung frequently gives a negative sputum. It, too, will respond to certain types of antisyphilitic therapy.

G. M. Brandau: A man who had been at Jefferson Davis Hospital had a recurrence several years later on the other side. The x-ray did not show any fibrosis in the area first involved. Last year I had a woman with it. I treated her and she gained weight and looked well but the check of her lungs did not show any difference in the x-ray picture. I felt the improvement she received was from physical standpoint instead of lungs.

Dr. Smith, closing: Dr. McDaniel made the statement that most of the cases have been reported and first diagnosed as tuberculosis. It is difficult to differentiate it from tuberculosis. The article of Dr. Greer's on where the two diseases are found together is good.

TREATMENT OF CHRONIC ALLERGIC AND INFECTIOUS SINUSITIS (Harris Hosen).—

H. E. Prince: I want to congratulate Dr. Hosen on looking for allergy at an early age. I am quite in agreement with him on some of his points, and not on others. I believe that food factors are more specific and that they should be determined. I think the most outstanding failures are the result of relying too much on food scratch testing and attempting to determine allergy in that way. The patient should be given a diet to prove which foods are tolerated. I fully realize that an allergic nose full of mucus will spread infection. It must be treated or the trouble will always be there. Dr. Hosen is to be congratulated for his attack on this problem.

Dr. Hosen, closing: I operated in a few sinus cases and got temporary results. Many punctures can be done in children without results. In some cases the patient got a severe shock and was cured or relieved for a number of years, with recurrence in a few years. These cures are not the real cures. If a positive scratch test can be determined with allergen, good results will be obtained. I am treating a patient with a ragweed therapy. During the winter she has many colds. She is a pure case of allergic sinusitis. Eczema usually gets well before the third year of life. Over 30 per cent of the cases will develop asthma. Dr. Bowen mentioned food facts; I have not gotten satisfactory results with food. Some patients are allergic to some foods; we take them off that food and they will not have asthma for a few months and then it starts again. A patient may have ten attacks of asthma one year and only four the next year. In nasal allergy if a certain food is eliminated, it will stop sniffling.

Scalenus Neurocirculatory Compression (F. Keith Bradford).—

James Greenwood, Jr.: Dr. Bradford has covered this subject with his usual thoroughness. It would seem fortunate that with as many narrow places through which nerves must pass to reach their final terminal points how rare it is that actual pressure symptoms appear. It is now generally known how frequently trouble occurs due to pressure on nerve roots from within the spinal canal due to herniated nucleus pulposus. The whole brachial plexus, but particularly the lower two roots, are rather closely confined back of the scalenus anterior muscle and it would seem that symptoms would occur more frequently than they do.

If there could be any criticism of this excellent paper it would be that there is insufficient emphasis on the aggravation of symptoms in this syndrome produced by positions which put the scalenus on stretch and relief of symptoms by procedures which relax the muscle; this pain is aggravated by pulling the arm down and holding it close to the side, by bending the head away from the affected side and by pressure over the insertion of the muscle. Symptoms are relieved by supporting the arm at the elbow, by elevating it above the head or by bending the head toward the affected side. These patients sleep comfortably when the arm is kept above the head.

Diagnosis of this is complicated and strictly a neurological problem. Once the diagnosis is made the surgical treatment is not difficult; at least not so when compared to the average neurosurgical procedure.

Dr. Siegler showed a moving picture in technicolor on gonad stimulation from pregnant mares serum hormones.

March 27, 1940

Harris County Medical Society held a regular business meeting March 27, with sixty-eight members present. J. T. Billups presided.

Resolutions of condolence were adopted on the death of Dr. S. C. Red and on the death of the mother of Dr. W. E. Ramsey.

C. M. Warner, chairman, gave the report of the board of censors.

The secretary presented the reports of the following committees: Adjudication, legislation and public health, press, and historical.

J. M. Trible reported for the Speakers Bureau. F. J. Slataper moved that a committee be appointed by the president consisting of members of the Speakers Bureau, the chairman of the board of censors and two members of the Society at large to make definite plans for a committee to approve speeches made by members of the Society at various places, such plans to be presented at the next business meeting. The motion carried unanimously.

Carl Wilson, representative of the liaison parent-teachers committee, gave the report of that committee.

John W. Brown presented the report of the pneumonia committee.

J. T. Billups gave the report of the treasurer for February.

New Members.—The following physicians were elected to membership: Milton Littell, W. K. Green, and C. A. Dwyer.

The following new members were introduced to the Society and presented with copies of the constitution and by-laws and code of ethics: M. G. Bloom, H. H. Cutler, T. H. Guthrie, J. C. Holsomback, N. A. Kilgore, and A. P. Overguard.

Communication from the Houston Academy of Medicine regarding the Army Medical Library was read by the secretary. E. L. Goar moved that the secretary write a letter to the Senators and Representative endorsing an appropriation for building of the Library.

A communication from Dr. Frank H. Lancaster, secretary of the Texas Pediatric Society, concerning the creation of a Section on Pediatrics of the State Medical Association was read by the secretary.

April 3, 1940

(Reported by Hugh C. Welsh, Secretary)

The Profession, the Public and Medical Crime—Jack W. Knight, San Antonio.

Urological Problems of the Female Urethra—C. M. Crigler, Houston.

Socialized Medicine and Its Relation to Public Health—J. H. Page, Houston.

Harris County Medical Society met April 3, 1940, with sixty-five members present. Alvis E. Greer, president, presided, and the scientific program as given above was carried out.

Urological Problems of the Female Urethra (C. M. Crigler).—

W. E. Bell: I enjoyed this paper very much. I want to emphasize one thing. A patient may complain and when we examine them and do not find pus or blood, it does not necessarily mean that nothing is wrong with them. These patients often do not have pus or blood.

The paper was also discussed by J. R. Blundell and J. Harolde Turner.

Socialized Medicine and Its Relation to Public Health (J. H. Page).—

H. A. Petersen: I am not prepared to discuss this, but a few years ago I gave a similar paper. I think that Dr. Page has stressed that there is no effort being made to put this thing over. It all comes down to two individuals who have been most effective in their propaganda, Mr. Epstein and Mr. Falk. These two are connected with the Rosenwald Foundation. They are interested in the cost of medical care and put out such information as was broadcast here a few years ago. There was much truth in it and much more falsehood. The government is interested in controlling everything—it seems that the key word today is *control.* I believe the attempt will be continued. A few years ago Dr. E. H. Cary, of Dallas, who knows more about socialized medicine than anyone in the State, argued against it. He has worked hard to stimulate the tide against it. Some of our doctors think that if we ever have State medicine, it will be the error of our own ways.

A few years ago Dr. Taylor suggested that I go over to the Labor Temple—they were giving a lecture on socialized medicine. Much to my amazement, they had a doctor representative from the Rosenwald Foundation. He painted a beautiful picture. I became irritated, and when he finished, I got up and said what I thought and I did not miss much getting a few bouquets. Those people are for it—there is no question about it. I was a lone wolf at that meeting. It is strange that a paper like Dr.

Page's should be presented and no one offer to discuss it. There should be more interest.

B. T. Vanzant: I think that what is wrong with this country is not the high cost of living but the cost of high living. Medicine is just like that. I do not believe that every patient who comes in requires a lot of laboratory work or a lot of high priced shots. The laborer is entitled to the best medical service—more so than the rich man but socialized medicine is impossible on account of the terrific financial load it would throw on the people.

J. F. Gamble: I enjoyed Dr. Page's paper very much. It has been my good fortune to practice medicine in Houston for several years. My practice consists mostly of people in moderate circumstances. I do not make a lot of money but I manage to live and get by and here are some of my observations. I was dumfounded not long ago when a member of this Society said to me: "We are going to have government control of medicine; you might as well get lined up for it." I do not know whether he is on the right road or not. I hear people say that they cannot afford a doctor. One of my patients who came into my office frequently, stopped coming and later when she came back, I asked her why it had been so long, and she said that she had been going to a chiropractor. I asked her why, and she said that it did not cost so much. Some of our patients are more mentally than physically upset and they do not need a lot of high priced treatments. It is not the paupers but the middle class who want cheaper medical care. Of course, there is a certain percentage of these people who think they are overcharged for everything that is done for them, but I think we should consider this point.

The paper was also discussed by E. O. Strassmann, F. J. Slataper, and A. E. Greer.

April 10, 1940

Progress in Surgery of the Large Bowel—G. W. Waldron, Houston.

Congenital Pyloric Stenosis in Infants—A Birth Injury—J. G. Flynn, Houston.

Endocrines in Gynecology and Obstetrics with Special Reference to Stilbestrol (Estrosyn) in the Treatment of Uterine Bleeding—Original Research on Menstruation—Karl J. Karnaky, Houston.

Harris County Medical Society met April 10, 1940, with 102 members present. A. E. Greer, president, presided and the scientific program as given above was carried out.

Progress in Surgery of the Large Bowel (G. W. Waldron).—

Frank L. Barnes: I enjoyed the paper and the plates. This is a subject we are all interested in. I think colon surgery as a whole is the crucial test of surgery. One can really demonstrate what can be done in cases of malignancies. The colon has abundant length and much of it can be spared so that an operation can be as medical as surgery can make it. An operation should give a greater relief from cancer here than anywhere else in the body. These cases are not early as a rule. With x-ray available and being suspicious that cancer of the colon is present, may lead to an early diagnosis. Dr. Waldron has called attention to the progress of surgery of the colon. Surgery of the colon has been so well described there is little to be added to it. He called attention to the fact that cancers are associated with anemia at times. One of the big things in colon surgery in the last few years is the preparation of the patient before the operation. A cancer in the colon is a serious thing and ought to be handled but very little. In any event the making of a cecostomy, either in the head of the cecum or higher up is about the best thing done in colon surgery. The colon should be prepared for whatever operation may have to be done later. These are never emergency operations. The patient should be prepared for them. If a patient has a cancer obstructing the colon, one may operate in three or four days. It is better to do a cecostomy. There is not chance for enough gas pressure to arise in the colon to break it down. We should not be in a hurry to give an enema. The colostomy should not be done hurriedly. Blood transfusions are good to build up the patient for an operation.

Dr. Waldron, closing: I want to thank Dr. Barnes for discussing my paper. The surgeon will have to adapt his ability to the patient and the patient's condition to his ability. The results of cancer of the colon surgery compare favorably with other operations. We have not been led to believe that until recently.

Congenital Pyloric Stenosis in Infants—A Birth Injury (J. G. Flynn).—

George F. Adams: Dr. Flynn has adequately discussed the different theories as to the causation of hypertrophic pyloric stenosis. The most plausable and accepted theory seems to be that there is a primary hypertrophy present at birth and a spasm secondary to and produced by it—if there can be congenital hypertrophies of muscle tissues in other parts of the body, which we know there are; as, for instance, the varying degrees of ring formation in the uterus. It certainly is plausible to assume that there can be a hypertrophy of the circular muscle fibers of the pylorus present at birth. John Homans in his textbook of surgery states that hypertrophy of the circular fibers may be present at birth and that difficulty of forcing gastric contents through a narrow rigid canal leads to so marked hyperemia and swelling of the mucous membrane as to complete the obstruction.

Christopher states that it has been definitely proven that the tumor is present at birth as he had seen two seven months premature infants with well defined tumors, but that in the majority of instances symptoms do not appear or become evident before the second week. This he states is due to secondary pylorospasm which is not present at birth. Hypertrophy and pylorospasm are interdependent and this is supported by the fact that the tumor may persist without symptoms when spasm has been relieved.

We know, of course, that the unskillful use of forceps and rapid fire deliveries can produce neck injuries. By careful use of forceps avoiding undue traction and not having the patient anesthetized to the point of completely stopping uterine contraction, it is practically impossible to cause neck injuries.

We have all seen cases of extremely difficult deliveries of large babies where undue traction of the neck had to be made to deliver the shoulders and no injury resulted. I recall the instance of a 12-pound baby in a primpara after a long drawn out labor, who was delivered by midforceps with extreme difficulty in delivering the shoulders but who had no symptoms of pylorospasm. I also recall the case of a patient delivered by Cesarian section where extreme care was exercised not to place any pull on the neck. The baby was operated on some three weeks later and typical hypertrophic pyloric stenosis found. Another case of an eleven and a half pound baby presenting by the breech in a woman with a borderline pelvis, after an extremely difficult delivery, had no trouble whatsoever.

As to the frequency of hypertrophic pyloric stenosis now as compared to those of many years ago before obstetrics was given so much attention, I can offer no statistics.

If there can be a severe case as evidenced by the true hypertrophic pyloric stenosis we can also have the mild case which is relieved by the usual medical treatment. Dr. Flynn states that these cases are the babies which are spoken of "hypertonic infants" as evidenced by spastic muscles, increased reflexes,

pylorospasm and regurgitation of food, all of which could be milder cases of injury to the cervical parasympathetics. This may be true.

To me the most plausible theory as to the causation of hypertrophic pyloric stenosis is that there is a congenital hypertrophy of the circular muscle of the pylorus followed in several weeks by a complete pyloric stenosis due to an added hypertrophy caused by a persistent pylorospasm either of neurogenic origin or due to violent contractions of the stomach. Neck injuries and injury to the parasympathetic fibers of the vagus nerve would in my opinion in very rare instances be a cause. I have enjoyed Dr. Flynn's paper very much and am very interested to note the outcome of his animal experimentation.

ENDOCRINES IN GYNECOLOGY AND OBSTETRICS WITH SPECIAL REFERENCES TO STILBESTROL (ESTROSYN) IN THE TREATMENT OF UTERINE BLEEDING—Original Research on Menstruation (Karl J. Karnaky).—

H. W. Cummings: I think Dr. Karnaky is as near right as any of us. I want to commend him on his research. I had a patient who was given radium twice, and she continued to bleed. After that I gave her stilbestrol and it stopped the bleeding the first day. Later she bled again but not as much as she did at first, then after several days she stopped. I have not talked to her in two weeks but the last time I talked to her she had not bled any more. Why did the radium not stop the bleeding? I think there is a good deal to think about in that one case.

J. E. Hodges: It is a fact that some of these patients we have operated on have stopped bleeding. We cannot always keep these fibroid patients on stilbestrol and expect to cure them. Ovarian surgery to stop bleeding is to be condemned; too many ovaries are taken out. Dr. Karnaky says that stilbestrol will absorb all the cysts. I believe as Dr. Strassman says, we had better study this drug very closely.

Frank Barnes: I have been interested in Dr. Karnaky ever since he was a student in Galveston and in his medical career. He has really put the Jefferson Davis Hospital on the map. I want to call attention to one thing—most negro women desire to have babies—I think that is due to sound ovaries.

John T. Moore: Dr. Karnakyy has interested me since my first contact with him. I sometimes envy the young men who have the opportunity in whatever line their ambition turns that they might be seekers after new truths. Truth is resistant—to find it is the important thing. Dr. Strassmann somewhat expressed a little side view of our good friend here. I sometimes tell him that he ought to slow down a little; not to ride so fast. I do not know that it has had any effect on him. I never go to Jefferson Davis Hospital that he is not over there working on some of these problems. It has interested me a great deal in his attitude and desire to discover things. If I knew as much chemistry as he seems to know, I would like to do some of this work even at this late date. The doctor waded out into water too deep for me, but I just wanted to commend all these young men who have ambition to search for things that are not accounted for. I believe that Dr. Karnaky has something here. It will take a check up of his work by other workers because it takes a lot of things to prove it.

The paper was also discussed by John Wall, E. O. Strassmann, and J. A. Clapp.

April 17, 1940

Occult Syphilis—A Neglected Factor in Diagnosis and Treatment—D. T. Gandy and W. A. Clark, Houston.
Bladder Symptoms with a Negative Urine in the Female—N. M. Goodloe, Houston.
The Surgery of Malignant Exophthalmus—Presenting the Case—Louis Daily, Houston.

Harris County Medical Society met April 17, 1940, with fifty-eight members and two visitors present. Alvis E. Greer, president, presided and the scientific program as given above was carried out.

Mr. C. P. Loranz, Secretary-Treasurer and General Manager of the Southern Medical Association, was introduced by Ralph Bowen, and made a short talk.

OCCULT SYPHILIS—A NEGLECTED FACTOR IN DIAGNOSIS AND TREATMENT (D. T. Gandy and W. A. Clark).—

C. E. Frey: I would like to call attention to the fact that this is the first paper I have heard on occult syphilis. A woman came into my office not long ago. She has three children. She said she had water diabetes. I became suspicious of that and had my laboratory assistant to test this case for sugar in the blood. I had a Wassermann test made on both the husband and wife, and they both had four plus reactions. Tests on the children were all negative. That woman had been treated by a doctor in New York for diabetes. Occult syphilis is a puzzle of the day, and it will continue to be the puzzle of the day. The trouble is money. We cannot get money to treat these cases.

John T. Moore: I hesitate to discuss this problem. I do not know what occult means. We have a form of disease we term as latent. I will have to study the derivation of these two words a little more. The term occult, as I understand the paper, carries with it what the authors have in mind. The therapeutic test is valuable.

The paper was further discussed by Leonard Myers, and the discussion was closed by the author.

BLADDER SYMPTOMS WITH A NEGATIVE URINE IN THE FEMALE (N. M. Goodloe).—

J. Harolde Turner: One condition that the doctor did not mention to which I wish to call to attention is endometriosis of the bladder. We have seen three cases recently. I do not know of anything that will give a woman a worse case of the jitters. It took some time before it dawned on us what the real pathology was. There is a time when the lesions found in the bladder are quite diagnostic. Another thing I think is rather important, is that a lot of these people have anaphylaxis and various food allergies. This should, of course, be borne in mind always. Many conditions in the urethra may be self-induced and this should also be borne in mind. I remember a case during my internship of a urethral masturbator, which caused the staff no little concern until the true status was recognized. Interstitial cystitis is a long chapter and the last word has not been written. Some men resect the area when accessible, but, of course, this is not without danger. Menopausal symptoms of the urethra have been stressed. This is one of the most gratifying things that I know of to treat. The use of estrogenic hormones along with mechanical dilation is quite important.

The paper was also discussed by Reese Blundell, which discussion was read by H. C. Welsh.

THE SURGERY OF MALIGNANT EXOPHTHALMUS—PRESENTING THE CASE (Louis Daily).—

H. A. Petersen: Dr. Daily has presented here a most unusual condition—a condition we know very little about. As far as the thyroid was concerned there were no evidences of goiter. We were at a loss just how to proceed, whether or not to remove the thyroid. We felt this would do no good. In the case reported by Naffziger the thyroid was removed. We did the Naffziger procedure on the right eye and Dr. Daily tried out the Sewall procedure on the left eye. The right eye was worse than the left to begin with. I would say the results of each are satisfactory. The problem comes up as to choice; I think it depends entirely on the point of view. The neurosurgeon would hesitate to use the procedure Dr. Daily uses. The object of the procedure I used is quite obvious

because it allows a more adequate exposure. I think that if one could be certain that there was no infection, Dr. Daily's procedure would be fine. On the other hand, if we have a patient who has had a sinus infection, it would not be good. He got his patient out much quicker than I did.

James Greenwood, Jr.: I would like to mention one other operation, which consists of removing only the lateral portion of the orbit. I ran across two cases where removing the orbit was not sufficient. If further room is needed, the lateral wall as well as the roof might be removed. Many do the Swift procedure on one side and another procedure on the other. The removal of the thyroid does not relieve exophthalmos. I think both Dr. Daily and Dr. Petersen are to be congratulated.

April 24, 1940

Harris County Medical Society held a regular business meeting April 24, with forty-five members present. Alvis E. Greer, president, presided.

A communication from Frank H. Lancaster concerning the creation of a Section on Pediatrics of the State Medical Association was read and approved on motion of F. J. Slataper, seconded by J. M. Trible.

F. R. Lummis presented the report of the board of medical economics, which was laid on the table for further consideration on motion of B. T. Vanzant, seconded by J. M. Trible.

Martha Wood, after giving the report for the sick and relief committee, moved that each member of the Society donate $1 a year for the sick and relief fund. The motion carried.

Reports were received from the following additional committees: program, J. Harolde Turner; press, Walter Coole; historical, Walter Coole; collective liability insurance policy, J. E. Hodges; coördinating, M. J. Meynier.

J. M. Trible gave the report of the speaker's bureau, which report was accepted on motion of John T. Moore, seconded by F. J. Slataper.

The report of the committee on collective liability insurance policy was adopted on motion of M. J. Meynier, seconded by J. Harolde Turner.

Walter Coole gave the treasurer's report.

New Members.—Milton Littell, W. K. Green and C. A. Dwyer, new members, were introduced by the president and presented with copies of the constitution and by-laws and code of ethics.

John T. Moore discussed a letter received from the National Physicians Committee. The secretary was requested to advise the National Physicians Committee that this communication had been favorably discussed by the Society.

Hunt-Rockwall-Rains Counties Society

May 21, 1940

(Reported by M. L. Wilbanks, Secretary)

Hayfever and Other Allergic Causes of Headaches (lantern slides)—Ray M. Balyeat, Oklahoma City.
Carcinoma of the Cervix (lantern slides)—J. W. Kelso, Oklahoma City.

Hunt-Rockwall-Rains Counties Medical Society met May 21, 1940, at the Greenville Club Lake for a barbecue and regular meeting of the Society. T. C. Strickland, president, presided and the scientific program as given above was carried out.

CARCINOMA OF THE CERVIX (J. W. Kelso).—The death rate from this disease is on the increase. The treatment is not standardized, the cause not being known. Early diagnosis is one way of lowering death rates; annual physical examinations are urged to determine the existence of cancer.

There are two recognized treatments in this country and abroad: Radical surgery is advocated by one group, while another group holds that surgery has no place in treatment. The author contends without reservation that these cases should never be treated surgically but always by radiation.

If, after a biopsy is taken, and all suspected cases should have such precautionary measures for diagnosis, and there is evidence of cancer, radiation both by radium and x-ray therapy are to be used. Radium is used for destruction of local cells while x-ray is used to destroy the distant cells not reached by radium.

Jasper-Newton Counties Society

May 30, 1940

Jasper-Newton Counties Medical Society met May 30, at the office of Dr. W. F. McCreight, Kirbyville, for a called session. D. C. Kennedy of Jasper, Farm Security Administration adviser, was present to assist the group in making plans for the year's program for farm security medical aid.

Following the meeting a social hour was enjoyed with members of the Auxiliary at the home of Dr. and Mrs. McCreight.

Jefferson County Society

May 20, 1940

(Reported by W. Price Killingsworth, Secretary)

Jefferson County Medical Society met May 20, at the Hotel Dieu, Beaumont, with thirty-six members present. J. W. Long, president, presided.

L. C. Heare gave an interesting report as a delegate to the recent State Medical Association meeting, detailing the report of the Executive Council and the report of the Committee on Postgraduate Education in the House of Delegates, high points of the annual session, and mentioned particularly a symposium on sulfanilamide presented before the Section on Medicine and Pediatrics. He also referred to the report of the Council on Medical Economics and announced the new officers for the Association for the coming year.

Paul Meyer announced that the House of Delegates had voted favorably on the creation of a separate Section on Pediatrics and also announced that endowments had been received for the Library of the State Medical Association.

T. A. Tumbleson mentioned in particular the activity and recommendations of the Cancer Committee and reviewed other actions of the House of Delegates.

W. D. Brown wanted to know if any action had been taken in regard to the prosecution of quacks or irregulars, to which T. A. Tumbleson advised that the Board of Medical Examiners had offered no resolutions and had given no reports.

S. T. Wier suggested that the secretary inquire what is being done with the $2 registration fee now required of each physician practicing medicine in Texas, which funds are paid to the State to be used in the investigation of quacks and irregulars.

W. D. Brown complimented the delegates and alternate delegates on their reports and pointed out the progress and prestige the Society had attained by keeping the same delegates in office year after year. He moved that the secretary reimburse the delegates the usual $30, which motion was seconded by A. R. Autrey and carried.

A communication from a drug company was read in which the company pledged to refrain from diagnosing or prescribing or referring patients for treatment in the future. It was voted that the secretary should write a communication to the Jefferson Drug Association quoting the communication referred to without giving its name, and advise the Jefferson Drug Association that it had received the hearty endorsement of the Society. The motion carried.

New Member.—B. W. Wood was elected to membership on application.

An interesting motion picture film on the toxemia of pregnancy was shown through the courtesy of the Petrolagar Company.

A motion picture on rib-resection at the Tuberculosis Hospital was shown by the authors, D. A. Mann and I. G. Wilson.

Kimble-Mason-Menard-McCulloch Counties Society
June 5, 1940

Kimble-Mason-Menard-McCulloch Counties Medical Society met June 5, in the offices of Floyd and G. G. McCollum, at Mason, with eight members and two visitors present. The scientific program was presented by O. N. Mayo and D. B. Shelton, both of Brownwood.

The next meeting of the Society will be held in Brady.

Nolan-Fisher-Mitchell Counties Society
May 6, 1940

Nolan-Fisher-Mitchell Counties Medical Society members were the dinner guests of J. W. Young and T. D. Young at Roscoe, May 6. Fourteen doctors attended the dinner meeting.

Tarrant County Society
May 21, 1940

(Reported by Craig Munter, Secretary)

The Diagnosis of Ectopic Pregnancy—R. G. Scobee, Intern, Harris Memorial Methodist Hospital, Fort Worth.

Hyperglycemia and Glycosuria in Coronary Thrombosis—W. D. Sedgwick, Intern, City-County Hospital, Fort Worth.

Tarrant County Medical Society met May 21, with fifty-one members and six visitors present. The winners of the annual intern case report contest presented the scientific program as given above, Dr. Scobee being the winner of the first prize and Dr. Sedgwick, the second prize.

The paper of Dr. Scobee was discussed by R. J. White and Harold J. Shelley.

The paper of Dr. Sedgwick was discussed by F. L. Snyder and C. O. Terrell, Jr.

John J. Andujar, chairman of the interrelationships committee, sponsor of the program, presented the prizes of $15 and $10, respectively, from the Society to the winners. James E. McConnell was also recognized by the committee, his paper having been selected for honorable mention.

Secretary Craig Munter gave the report of the board of directors in regard to the National Physicians Committee, stating that the organization is an ethical one and recommended that it be supported by individual members of the Society. On motion of Craig Munter, seconded by J. Franklin Campbell, the report was adopted.

R. G. Baker moved that the Society dispense with meetings during the months of June, July and August, which motion carried.

Walten H. McKenzie stated that a company with offices in the Medical Arts Building is advertising itself to be expert in fitting hearing aid devices. Following discussion M. H. Crabb moved that a committee composed of three eye, ear, nose and throat physicians be appointed, which, with the building committee, would investigate the matter of hearing aid sales through offices in the building, and that a report be made to the Society at the next meeting. The motion was seconded by Gatlin Mitchell and carried.

Reports from R. G. Baker, John M. Furman and C. O. Terrell, delegates to the State Medical Association in Dallas, and L. H. Reeves, retiring president of the State Medical Association, were received regarding the proceedings of the recently concluded Dallas meeting.

The attendance prize, a croquet set, was won by C. S. Woodward.

Wichita County Society
June 11, 1940

(Reported by C. E. Mangum, Secretary)

Cardiovascular Syphilis—W. W. Rucks, Jr., Oklahoma City.

Fever Therapy in Acute Anterior Poliomyelitis—R. L. Daily, Wichita Falls.

Wichita County Medical Society met June 11, 1940, at the Wichita Club, Wichita Falls, with thirty-four members present. The scientific program as given above was carried out.

It was voted that the president should appoint an executive committee. The executive committee was appointed as follows: M. H. Glover, T. L. Hyde, and J. A. Heyman.

The Society voted to discontinue monthly meetings in July and August.

A letter was read advising that the Northwest Texas District Medical Association's fall meeting will be held in Wichita Falls.

CHANGES OF ADDRESS

Dr. Bryant O. Baker, from Dallas to Comanche.

Dr. Lewis Barbato, from Galveston to Houston.

Dr. J. W. E. H. Beck, from Austin to DeKalb.

Dr. W. E. Carruth, from Brownsville to Littlefield.

Dr. Dan Hines Clark, from Quanah to Corpus Christi.

Dr. D. W. Davis, from San Antonio to George West.

Dr. G. W. Edgerton, from Harlingen to Corpus Christi.

Dr. Albert W. Hartman, Jr., from San Antonio to Boston.

Dr. John J. Hopper, from Brownwood to Stanton.

Dr. J. Campbell Kern, from Sanderson to Nashville, Tennessee.

Dr. W. E. Long, from Dallas to Boston, Massachusetts.

Dr. U. S. Marshall, from Weslaco to Roswell, New Mexico.

Dr. Oscar M. Marchman, Jr., from Philadelphia to New York City.

Dr. S. Perry Post, from San Antonio to Boerne.

Dr. R. G. Scobee, from Fort Worth to St. Louis, Missouri.

Dr. I. L. Van Zandt, from Galveston to Fort Worth.

Dr. H. M. Westover, from Ropesville to Streetman.

Dr. Carleton C. Wright, from Dallas to Memphis, Tennessee.

AUXILIARY NOTES

AUXILIARY NEWS

Officers of the Woman's Auxiliary to the State Medical Association of Texas; President, Mrs. S. C. Applewhite, San Antonio; honorary life president, Mrs. A. C. Scott, Sr., Temple; president-elect, Mrs. S. F. Harrington, Dallas; first vice-president, Mrs. William Hibbitts, Texarkana; second vice-president, Mrs. A. E. Moon, Temple; third vice-president, Mrs. A. B. Pumphrey, Fort Worth; fourth vice-president, Mrs. Joe B. Foster, Houston; recording secretary, Mrs. Walter A. Minsch, Kerrville; publicity secretary, Mrs. W. F. Armstrong, Fort Worth; treasurer, Mrs. J. Frank Clark, Abilene; parliamentarian, Mrs. J. W. Tottenham, Brownwood; and corresponding secretary; Mrs. E. W. Coyle, San Antonio.

Bowie-Miller Counties Auxiliary met May 24, at the Coffee Shop, Texarkana, with Mrs. W. Decker Smith as hostess. Mrs. Ralph Cross, president, presided and had charge of the program. Mrs. Cross presented each member with a cleverly arranged "report card," showing the member's attendance, the work done by the individual, and whether or not she had "passed." Mrs. L. J. Kosminsky and Mrs. Harry Murry, delegates to the Arkansas State Auxiliary

meeting at Fort Smith, gave interesting highlights of that meeting, reporting that 17,000 subscriptions to *Hygeia* had been sent from the State of Arkansas.

Mrs. William Hibbits and Mrs. Allen Collom, delegates to the Texas State Auxiliary meeting at Dallas, reported that 615 women were registered and the records showed sixty-eight organized county auxiliaries in Texas. Bowie County Auxiliary was awarded a prize of $30, given by Dr. Preston Hunt of Texarkana, president of the State Medical Association, to the Auxiliary having the greatest percentage of members reading the TEXAS STATE JOURNAL OF MEDICINE.

Mrs. Cross, retiring president, presented the gavel to Mrs. Joe E. Tyson, incoming president, and expressed her appreciation for the fine coöperation given her during her administration, and wishing for Mrs. Tyson the same pleasant association.

Mrs. Tyson introduced the following officers who will serve with her during the coming year: Dr. Frances Spinka, first vice-president; Mrs. J. F. Williams, second vice-president; Mrs. R. R. Kirkpatrick, third vice-president; Mrs. A. G. Lee, fourth vice-president; Mrs. N. B. Daniel, secretary; Mrs. Perry D. Priest, corresponding secretary; Mrs. John T. Porter, treasurer; Mrs. C. E. Kitchens, publicity chairman, and Mrs. P. H. Phillips, parliamentarian.

At the close of the meeting a salad plate was served to twenty-one members.—Mrs. W. Decker Smith.

Jasper-Newton Counties Auxiliary met May 23, at the home of Mrs. W. F. McCreight, Kirbyville, president.

Mrs. McCreight gave a report of the recent State Auxiliary meeting in Dallas.

This was the last meeting before fall. The following year book committee will plan the year book before regular meetings are resumed in September: Mesdames W. F. McCreight, A. J. Richardson, H. W. Hardy, W. R. Kelley, W. R. Worthey, C. S. Damrel, Worthy Gellatly, and Miss Edna Schaeffer.—Miss Edna Schaeffer.

Wichita County Auxiliary met May 21, at the home of Mrs. B. W. Dorbandt, Wichita Falls, with twenty-two members and three visitors present. Assistant hostesses were Mesdames C. H. Brown, A. T. Hanretta, R. E. Baxter, and A. D. Pattillo, Jr.

Mrs. Q. B. Lee, second vice-president of the State Auxiliary, installed the following officers: Mesdames B. W. Dorbandt, president; J. A. Little, vice-president; M. Caskey, recording secretary; R. L. Hargrave, corresponding secretary; J. D. Hall, treasurer; J. C. A. Guest, parliamentarian, and J. B. Nail, historian.

Mrs. O. B. Kiel, retiring president, conducted the business session at which annual reports of officers and committee chairmen were given.

Mrs. B. W. Dorbandt, delegate to the State Auxiliary meeting in Dallas, gave a brief report of that meeting. Mrs. Bruce Greenwood, violinist, presented musical numbers, accompanied by Mrs. F. R. Collard, who was in charge of the program.

Following the program a social hour was enjoyed and refreshments were served.—Mrs. J. A. Little.

BOOK NOTES

[1]**Obstetrical Practice.** By Alfred C. Beck, M. D. Professor of Obstetrics and Gynecology, Long Island College of Medicine; Obstetrician and Gynecologist-in-Chief, Long Island College Hospital, Brooklyn. Cloth, 841 pages. More than one thousand Illustrations. Second edition. Price, $7.00. The Williams & Wilkins Company, Baltimore, 1939.

[1]Reviewed by T. F. Bunkley, M. D., Temple, Texas.

The science of the practice of obstetrics has changed greatly in the past twenty-five years, in practical application as well as in theory. Physiological and pathological factors, methods of management in normal and abnormal obstetrics, and theories and practices which were considered a few years ago as definitely established axioms, have now either been discarded as scientifically untrue or proven to be altogether impractical.

Beck, in the preface to the second edition of this work, takes cognizance of these facts and states that it has been necessary for him to revise and rewrite whole paragraphs and in some instances almost whole chapters in his new book because of the many changes brought about by recent scientific discoveries. For instance, recent research has changed completely the older idea concerning the physiology of menstruation and the segmentation and implantation of the ovum. The same is true concerning the changes in the maternal organism during pregnancy, as well as the modern methods of management of pregnancy and the puerperium. The toxemias and abortion and certain complications of pregnancy, such as anemia, cardiac disease, diabetes, and syphilis, have come to assume new importance and significance because of modern thought and knowledge. The role of endocrinology in the whole realm of reproduction has been given adequate and enlightened consideration by the author.

The entire chronological phase of obstetrics has been so well treated by Beck, especially as regards proper sequence of the various phases and by his many illustrations and drawings, that the different subjects discussed are made much clearer for both the general practitioner and the student.

The first seven chapters deal with the physiology of menstruation, pregnancy and the fetus, and changes in the maternal organism. Beck discusses rather in detail the histology and physiology of the reproductive organs. He stresses the recent thought expressed concerning the part played by vitamins, endocrines, and hormones, during the various stages of pregnancy and the effect these factors have on the development of the fetus and fetal membranes and the maternal changes. The marked excretion and secretion of the hormones and the changes brought about in these hormones by pregnancy are presented.

Chapters eight to sixteen inclusive are given over by the author to a discussion of normal pregnancy, diagnosis and management of pregnancy, presentation and position of the fetus, essential factors of labor, mechanism and clinical course of labor, and lastly the management of labor and the puerperium and lactation. These chapters are especially adaptable for teaching purposes since their contents are very much clarified by illustrations and diagrams. The natural sequences of the subject from the early diagnosis of pregnancy to the care of the patient during the puerperium and lactation are so well amplified that the student may form a very graphic picture in his mind of the entire physiological course of a normal pregnancy and labor.

The author, after giving careful consideration to normal pregnancy and labor, takes up the discussion of abnormal conditions and complications of both pregnancy and labor which might be brought about by the fetus. These conditions include abnormal presentations and positions and diseases of the decidua and fetal membranes. Here again Dr. Beck makes free use of drawings and diagrams to bring out more clearly the points he desires to put before the reader's mind; and though some of the conditions are treated a little too much in detail, the final successful results that would be obtained by carrying out carefully the author's technique would well

repay the obstetrician for the time required to master the details.

The last half of the book is a discussion of the many conditions and factors which may complicate pregnancy and labor. Abortion, ectopic pregnancy, and the toxemias of pregnancy are amply treated from the standpoint of etiology, diagnosis, management and prevention. Some of the newer thoughts concerning the part played by the endocrines in abortion, as well as the somewhat recent theories of the disturbance in water balance or arteriolar spasm, as in explaining the pathogenesis of eclampsia, have been given careful consideration in these chapters.

The author then continues with the discussion of the complications of pregnancy which may be either medical or surgical. He insists on an early recognition of these conditions and their proper management in order that the life of the mother and baby may not be put to too great a risk or their future health impaired.

Pathology of labor due either to anomalies of the powers or to faulty passages is well handled by the author. But it is essential that the operator have complete knowledge of the condition that might bring about anomalies of the powers, just as it is essential that he make an early diagnosis of the existence of faulty passages, whether these be the result of contracted pelves, dystocia due to the soft parts, or to abnormal growths in the pelvis. Early recognition and a thorough knowledge of the existing abnormal conditions are necessary before proper management can be instituted.

Dr. Beck has given us a work which is both entertaining and interesting because of its literary technique. It is instructive because its scientific contents are unexcelled. It gives a most excellent concept of the art and science of the practice of obstetrics for the student, the general practitioner, and the specialist.

[2]**Principles and Practice of Aviation Medicine.** By Harry G. Armstrong, B. S., M. D., Capt., Medical Corps, United States Army; Director, the Aero Medical Research Laboratory, Air Corps Material Division. Cloth, 489 pages. Price, $6.50. The Williams and Wilkins Company, Baltimore, 1939.

It has been thirteen years since the last textbook on this subject appeared, and therefore highly important that the newer accumulated knowledge be brought up to date.

In aviation circles no one is better recognized as preëminently qualified to speak authoritatively than Captain Armstrong. He is a graduate of the School of Aviation Medicine at Randolph Field, Texas, and for the past several years has been director of the Aero-Medical Research Laboratory at Wright Field, Dayton, Ohio.

While this book was written primarily for the guidance of the flight surgeon and the medical examiner, it holds much of interest to the general practitioner. It stands today undoubtedly as the standard textbook in aviation medicine, not only here but abroad.

[3]**Demonstrations of Physical Signs in Clinical Surgery.** By Hamilton Bailey, F. R. C. S. (Eng.), Surgeon, Royal Northern Hospital, London; Surgeon and Urologist, Essex County Council; Surgeon, Italian Hospital; Consulting Surgeon, Clacton Hospital, Chatham; External Examiner in Surgery, University of Bristol. Seventh edition, revised, with 377 illustrations, some in color. Cloth, 291 pages. The Williams and Wilkins Company, Baltimore, 1940.

Any book that has justified a seventh edition must be worth while. I wish to quote the introductory remarks: "The making of a surgical diagnosis resolves itself into seven stages—usually not more than three or four of these will be found necessary.

"1. The taking of a history, and a general observation of the patient.

"2. The elicitation of physical signs.

"3. A mental process on the part of the surgeon, whereby 1 and 2 are sifted and correlated, and a logical conclusion is drawn.

"4. A differential diagnosis is entertained: that is also a mental process—largely one of exclusion, but reinforced when possible by further physical signs.

"5. A scientific confirmatory test—usually performed by a colleague—*e. g.*, x-ray, chemical, bacteriological, histological examinations.

"6. The more accessible parts of the interior are rendered visible by ingeniously constructed tubes, such as the cystoscope, sigmoidoscope, esophagoscope.

"7. An exploratory operation is performed.

"If a diagnosis is still found wanting after the seven stages and combinations thereof have been exploited, there remains but one last court of appeal —the postmortem room.

"The seven stages may be termed the 'surgical crescendo.' It is mainly with the second stage and the latter part of the fourth that this book is concerned."

The author certainly has presented a most comprehensive outline of the physical signs in clinical surgery in a work of only 291 pages, and almost half of it is taken up with excellent photographic plates which to the reviewer's way of thinking serve better to fix the subject matter in most anyone's mind. His descriptions of the physical signs are all short, concise and to the point.

The stressing of a comprehensive history and complete physical examination to determine a diagnosis with the use of a laboratory and other scientific examinations to confirm findings is most commendable.

The two short chapters devoted to a diagnosis of non-acute and acute abdominal lesions are especially good.

The addition of this volume to the library of any member of our profession is recommended.

[4]**Shock, Blood Studies as a Guide to Therapy.** By John Scudder, M. D., Med. Sc. D., F. A. C. S. From the Surgical Pathology Laboratory of the Physicians and Surgeons, Columbia University, and the Department of Surgery, the Presbyterian Hospital, New York City. Cloth, 235 pages, 66 illustrations, five plates, three of which are in color. Price $5.50. J. B. Lippincott Company, Philadelphia, 1940.

The author gives a concise resume of the theories of shock, after which he discusses the chemical changes found in blood while an individual is in shock. Special consideration is given to the action of potassium, and the part its increase in plasma plays in shock.

Treatment of shock in vogue in different periods, with the present-day treatment based on etiology, and the results of blood studies, is given.

The final section is a laboratory manual giving an outline of blood volume and specific gravity determination, with tables for determining blood proteins.

The book is well written, and gives numerous case histories illustrating results of treatment designed to fit individual cases. This, or some other similar work, should be available for anyone dealing with patients in shock.

[2]Reviewed by Hodges McKnight, M. D., Fort Worth, Texas.
[3]Reviewed by Paul C. Murphey, M. D., Waco, Texas.
[4]Reviewed by Marvin D. Bell, M. D., Dallas, Texas.

DEATHS

Dr. William J. Harlan, Bartlett, died May 2, 1940, in a Temple hospital, of coronary thrombosis.

Dr. Harlan was born December 1, 1874 in Alexander City, Alabama. His academic education was received in the Southern University of Alabama, from which he was graduated with a B. S. degree. His medical education was obtained in Tulane University, New Orleans, from which he was graduated in 1898 with high honors. After his graduation he served an internship in the Charity Hospital, New Orleans. He then lived and practiced at Hackneyville, Alabama, for one year following which he practiced in Corsicana, Texas, for three years before locating in Bartlett in 1902, which was his home for the remainder of his professional life. During his professional career he had taken postgraduate work at Philadelphia.

DR. WILLIAM J. HARLAN

Dr. Harlan was a member throughout his professional life of the State Medical Association and American Medical Association through the Bell and Williamson County Medical Societies. He was a greatly beloved general practitioner, who had rendered fine professional service to the community in which he lived. In addition to his profession, he was a civic and religious leader. He served as a member of the Bartlett school board for many years and was its president for ten years. He was an organizer of the Bartlett Stag Party, was its third toastmaster in 1922, and served again in this capacity as its twenty-first on January 2, 1940. He was a member of the Methodist Church, which institution he had served as a trustee, being president of the board of trustees of this institution at the time of his death. He was a Mason and a member of the Shrine.

Dr. Harlan is survived by his wife, formerly Miss Estelle Hutcheson to whom he was married January 20, 1899 in Alabama. He is also survived by a daughter, Mrs. Paul M. Woods, Cisco; one son, Dr. Rudolph K. Harlan, Temple; two brothers, E. W. Harlan, Searcy, Arkansas, and Aaron Harlan, Bishop, Texas; and four sisters, Mrs. Tom Tankersley, Mrs. Docie Tankersley, and Mrs. Lucy Carpenter, Kellyton, Alabama, and Mrs. Rena Tankersley, O'Brien, Texas.

Dr. John C. King, Harrold, Texas, died March 2, 1940, of coronary thrombosis.

Dr. King was born December 7, 1872, in Holliday, Tennessee. His academic education was received in the Holliday Independent Normal College. His medical education was obtained in the University of Tennessee, Nashville, from which he was graduated in 1901. Immediately after his graduation, he began the practice of medicine at Frederick, Oklahoma, where he remained until 1902, at which time he removed to Harrold, Texas, where he was in active practice for the remainder of his life.

Dr. King was for many years a member of the Wilbarger County Medical Society, State Medical Association, and American Medical Association, being in good standing in these organizations at the time of his death. He served the Wilbarger County Medical Society as president in 1935. Throughout his professional career he had been a consistent and ardent supporter of the lofty aims of organized medicine. In addition to his profession he took an active interest in the social, religious, and educational welfare of his community. Apart from these activities he was a lover of sports, a student of government, and a member of several fraternal organizations including the Masonic order, Odd Fellows, and Woodmen of the World. His thirty-nine years of capable medical service to his community had endeared him to the entire citizenship.

Dr. King was first married to Miss Price Vaughn of Harrold who died in 1915. One son of this union preceded him in death. His second marriage was to Miss Cora Vaughn, a sister of his first wife, who survives him. He is survived by one son of his first marriage, Harrison, and a daughter, Miss Price King, and a son Leslie King by his second marriage, all of whom live in Harrold. He is also survived by two sisters, Mrs. Emma Ralston, Boise City, Oklahoma, and Mrs. Mary Boyd, Oklaunion, Texas, and six brothers, J. B. King, B. S. King, and Dr. T. A. King, all of Vernon; J. M. King, Oklaunion; U. J. King, Sudan, and R. W. King, Boise City, Oklahoma.

Dr. Thomas A. Martin of Loraine, Texas, died May 4, 1940, at his home, of heart disease.

Dr. Martin was born July 19, 1866, in Talladega County, Alabama. At an early age he removed with his parents to Van Zandt County, Texas, where they located, the community becoming known as Martins Mill, being named after the family. His preliminary education was received in the schools of his community. His medical education was obtained in the Vanderbilt University School of Medicine, from which he was graduated in 1902. He began the practice of medicine in East Texas. He later moved to Duncan, Oklahoma, where he lived and practiced for one year. He then returned to Texas, where he practiced at Grand Saline until 1907 when he removed to Loraine, which was his home for the remainder of his professional life.

Dr. Martin was a member of the Van Zandt County Medical Society while living at Grand Saline, the Mitchell County Medical Society after his location in Loraine, being a charter member of the latter organization, and of the Nolan-Fisher-Mitchell Counties Medical Society after its organization. He was a member for many years through these societies of the State Medical Association and American Medical Association. He was the typical family practitioner type, who had served his community faithfully and well for many years. In addition to his services as a physician, he was an ardent churchman, having served the Methodist Church as a superintendent of its Sunday School, and as a Steward and trustee, being chairman of the board of trustees of his local church for several years. He was a greatly beloved physician and highly respected citizen.

Dr. Martin is survived by his wife, formerly Miss Curtis Amanda Reagan, to whom he was married in 1889 at Hardy, Montague County, Texas. Three children of that union preceded him in death. He is surviced by five sons, S. A. Martin, Colorado; W. R. Martin, C. H. Martin and T. K. Martin, Loraine, and R. D. Martin, Littlefield.

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Vol. XXXVI **August, 1940** **No. 4**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

Medical Preparedness.—We doubt the appropriateness of the title, but there can be no doubt as to the wisdom of the activities in which we are engaging under the term. There is no war, and, so far as we can determine, none in direct prospect. Even so, conditions in this country are such that should we become involved in any war, we would be practically helpless. That means prompt, vigorous and intelligent preparation in anybody's language. As in the previous World War, the medical profession has been among the first groups of our people to recognize the importance of preparedness. In our report on the Transactions of the House of Delegates of the American Medical Association, at New York, in June, we published a resolution presented to the House of Delegates by the Surgeon General of the Army, and adopted by that body. This resolution had the same intent and purpose as a resolution submitted to the House by the Board of Trustees of the Association. As a result of the two resolutions, a committee of the American Medical Association was set up, upon which committee there is a member of each Corps Area in the country, and a high-powered ex-officio membership from the Board of Trustees, all under the chairmanship of Dr. Irvin Abell of Louisville, Kentucky, recently President of the American Medical Association, and for years active in Association affairs.

This committee has begun its rather extensive and difficult task, and the work is proceeding apace. The first requirement, according to the resolution, was that the American Medical Association conduct a survey of the medical profession. A questionnaire has been prepared, designed to bring out all of the factors involved in the process of selecting physicians for emergency service, and distributing them according to need, as well as to their adaptability and fitness for service. One of these questionnaires has been sent to each licensed physician in the United States, with due explanation, and request for speedy action. The questions have been prepared by experienced statisticians, under the instruction of the Committee on Medical Preparedness and the Surgeon Generals of the Army, Navy and United States Public Health Service. They have been set up in the questionnaire so that they can be transferred to punch cards, and a variety of tabulations speedily and correctly made. Thus, not only will be developed a reservoir of physicians available for the variety of medical service to be required in the anticipated emergency, but a segregation of physicians into groups for specialized and special service. Manifestly, neither the reservoir nor the proposed classification can be satisfactorily made except through the prompt and complete cooperation of physicians of the whole country. Naturally, tardiness or failure on the part of

physicians will not be allowed to interfere with the service. Physicians who do not submit answers to the questions in this manner propounded to them, will remain listed as citizens available to the draft. It is hardly likely that any physician will be drafted into the line for combat service, except upon his expressed desire for that type of service, but there will be much confusion in the effort to adjust matters in such cases later on. Hence the urgency for prompt and complete compliance with this first requirement in preparedness.

Of the questionnaires thus sent out, 40,000 were returned within ten days. They are being returned now quite satisfactorily, but it is becoming more and more apparent that many physicians are neglecting this obligation and opportunity. Physicians are reporting that they either did not receive the questionnaire or have received it and not appreciating its value, let it get away from them. In such cases, application for additional blanks should at once be made either to the American Medical Association at 535 North Dearborn Street, Chicago, Illinois, or to the office of the State Medical Association at 1404 West El Paso Street, Fort Worth. They will be promptly furnished. It is important, indeed essential, that the questions on these blanks be carefully and accurately answered, and the blanks promptly returned to the American Medical Association.

During the other World War, there was much criticism of the Army for what seemed to be almost universal misplacement of medical officers. Distinguished specialists were assigned to duty making sanitary inspections, peddling pills and giving castor oil, and even serving as mess officers, and the like. In our criticism we entirely overlooked the fact that doctors entered the service when and where opportunity offered, and there was no opportunity for classification. In fact, there was no Army. One was in process of organization, exactly as the medical service was in process of organization. No wonder that there was much confusion in this respect. The effort is now being made to correct that situation before it develops. It is hoped that if and when the emergency arises, our armed forces can be supplied with the sort of doctors needed, whether general practitioners or specialists in any line. It will then be up to the Army to keep them busy in accordance with their qualifications.

Not alone do we need to consider our armed forces. Medical service will be as insistently required to care for those engaged in the industries, particularly those most directly concerned with the production of munitions and the essential material of warfare. The public health cannot in any sense be neglected. This service during wartime will be more nearly essential than ever before. Nor can our civil population be allowed to go without medical service. Modern warfare involves not merely soldiers, but civilians as well, even men, women and children. The entire population of a country at war is at war and must be regimented, directed and protected. The questionnaire under discussion will determine who of our number are best fitted for each type of service. It should at least give to the selective authority the data needed to make satisfactory distribution of medical service.

The procedure as planned is quite simple. Complete data pertaining to the eligibility, willingness to serve and adaptability of physicians throughout the country will be assembled at the headquarters of the American Medical Association, at Chicago. Representatives of the armed forces of our country, and the public health service, will be assigned to duty there. State medical associations will be furnished with their share of these data, as will county medical societies. When there is need for physicians to serve in any capacity, that need is made known to the Chicago office. The Chicago office will call upon state offices for their pro rata share, and state officers will in turn call upon county societies for such part of the number under call as they can be expected to furnish and at the same time maintain medical service at home. Manifestly, here at the bedside is where final determination is made as to who should, can and will serve in any given capacity. The process of breaking down the centralization to this point, should insure the maximum good results for all concerned.

Finally, we think it will be conceded that the medical profession is as patriotic as any other group in the country. Indeed, we feel that it is just a bit more so than most of them. We look to the medical profession to lead in the patriotic effort to prepare our country for war. The industries of the country prepare the machinery necessary to fight a modern war. They will be able to do that with fair expedition, whether or not sufficiently so to meet the impending emergency. However, it is certain that unless the public mind grasps the importance of preparing our manhood, and as for that, womanhood, for war, we might as well not set up the machinery. It takes longer to train men to handle weapons than it takes to make the weapons. Formerly, wars were won by the armies which had the will to win. Today, that is not enough. There must not only be the will to win, but the machinery with which to do the winning. Our task as physicians

is not alone that of supplying medical service for the armed forces and civilian components of our country, when the time comes, but to prepare our people to meet such an emergency. At best, it is quite likely that there is not time enough for much of that, but we have confidence that the adaptability and ingenuity of the American people will enable them to perform prodigiously now as they have heretofore done.

The Official Family for the Current Year is set up in these pages for the benefit of our readers. This is valuable information. It should be, and for some years has been, compiled and presented in the JOURNAL. We trust our readers will preserve the list and keep it ready at hand. It is no uncommon occurrence for a reader to write to the Central Office for information of exactly this sort. The Central Office is glad to accommodate, but the inquirer might as well save himself the time and trouble by referring to the list.

For some years we have taken advantage of this opportunity to present to our readers something of the rationale of our setup. We believe this custom has had beneficial effect. Our Association is known throughout the country to be one of the best organized state medical associations, which we say with all due diffidence, and there can be little doubt that the effort on the part of our official family to make procedures and proceedings an open book to the extent feasible, is responsible for our solidarity and accomplishments, whatever they may be. Hence the following brief discussion, which is more or less a repetition of what has gone before.

Starting at the top of the list, let us consider the function of our President. He is the coördinator, the leader and the inspiration of the organization. He has no other function. If he has been well selected, no one can render any greater service in any capacity than he. He has neither executive nor administrative duties. He cannot spend any of our money, settle any of our controversies, or tell anybody where to head in, or how. He can, however, if he is truly the head of the medical profession in the state, as he is set up to be, bring these things about to the satisfaction of all who love the Lord.

Our Vice-Presidents are of equal rank and have the usual functions of second in command with no determination as to which of the three will step in and take leadership when occasion requires it. It is intentionally so. Should for any reason the President become incapacitated, it is up to our Board of Councilors to select one of the three vice-presidents to take his place. We might think the President-Elect would do that, but the President-Elect has already been fitted into a niche, and it would not be very good judgment to remove him therefrom. He is serving an apprenticeship. The Vice-Presidents have been selected to some extent in view of their fitness for immediate service should our President at any time during his term be no longer available for service. In the meantime, the vice-presidents are presumably available for any assignment by the President or other constituted authority.

The Secretary of the Association is, for all practical purposes, the executive or administrator of the organization. He serves under orders of various officials and groups set up by the constitution and by-laws for such purposes. Thus he receives and relays to the Treasurer all money coming to the Association, and pays out the same, under orders and routine set up by the Board of Trustees. Thus he receives and transmits to the Board of Councilors complaints, suggestions and requests pertaining to matters of organization and medical ethics. Thus he deals with the problem of medical economics throughout the state, under orders of the Council on Medical Economics, and so on throughout the routine. He has original jurisdiction in a good many matters, of course, membership rolls and the like. His duties are too many and ramify so variously that they cannot very well be discussed here in detail.

The Board of Trustees have complete and final control of the money and property of the Association. The Trustees are elected by the House of Delegates and told to go to it in all such matters. After that, the only way to veto any policy of the Board is for the House of Delegates to advise and elect. In practice the Trustees usually follow the will of the House of Delegates when officially expressed. The will of the House of Delegates with regard to some policy might be expressed unfortunately, or under stress and excitement, under which circumstances the Trustees might exercise the veto. A majority of the Board can be secured in two elapsed years. By such time it is assumed that the rationale of the thus rejected policies will be definitely determined. The plan appears to be a very fine compromise between extremes in the matter of control.

The same thing happens with regard to the Board of Councilors. There are fifteen councilors, each elected on a three-year term of office basis. It is easily possible to change the policy of the Board of Councilors in one year of elapsed time, which would seem to be about right for practical purposes. It is the function of the Board of Councilors to organize the profession of the state, and keep it organized. The Council is the supreme

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court of the Association in all matters of compliance, or lack of compliance, with our constitution and by-laws and the principle of medical ethics. There is no appeal from the decisions of the Board of Councilors in the matter of medical ethics, except to the Judicial Council of the American Medical Association. In short, the judicial functions of the organization closely parallel those of the state.

The delegates and alternate delegates to the American Medical Association are generally called upon to deal with the affairs of the organization on a national basis, although no such function has been formally assigned the group by our constitution and by-laws. It is a matter of common sense to refer problems of national import to a group which has been giving such affairs concentrated thought. There is an exception to this function of the delegates to the A. M. A. All legislative matters, whether national or state, are dealt with by our legislative committee. Likewise, matters of medical economics on a national basis are handled by another group, our Council on Medical Economics. Indeed, the functions of several of our groups may at any time assume national proportions, in which instance they are dealt with by the groups directly concerned.

Our Legislative Committee is organized on a five-year, overlapping term of office basis, in order that it may develop and maintain a continuing policy. Years of experience have demonstrated the need of something of the sort. A committee which changes its personnel each year cannot do that. This is of direct importance in connection with not only legislative activities but political activities in connection with legislation. Members of our Legislature, and all who aspire to such membership, must consider that the same policies pertaining to medical and public health legislation one year will be in force next year, and perhaps for several successive years. And while it is true that the State Medical Association is not in politics, it is at the same time true that the medical profession of the state is the official adviser of the Legislature concerning medical and public health matters. It cannot very well evade that responsibility, and should not and does not evade it. It is particularly careful to keep out of partisan politics, and it is felt that there is no intent on the part of any governmental agency to require other than that.

The Legislative Committee has no authority to legislate. It must sometimes act in opposing or supporting measures in the Legislature without instructions from the House of Delegates, in which instance it promptly calls into consultation the entire Executive Council, of which it is a part.

There are several committees of the Association which may at any time be called upon to assume some legislative function, such as, for instance, the Committee on Mental Health, or the Council on Medical Economics. When that happens, there should be automatic cooperation with the Committee on Legislation. The House of Delegates has heretofore so directed.

The Executive Council comprises the officers of the Association, the Board of Trustees, the Board of Councilors, and the Legislative Committee. These are the groups most likely to be concerned in any matters about which there must be decision in an emergency. They are all elected by the House of Delegates, and are ex-officio members of the House of Delegates. They represent the House of Delegates in all matters which must be considered between meetings of the House. It is rather impracticable to call the House of Delegates together for the consideration of any except the most important emergency matters. The Executive Council cannot legislate, in the usual meaning of the term, but it can act in emergencies, and it is up to the President of the Association to determine the fact of emergency, and direct proceedings accordingly.

The economics of medicine have long disturbed medical organizations. On the one hand, the physician must make his living out of his occupation, while on the other he is engaged in good samaritan activities. It seems difficult to justify the mercenary motive in a calling of that character. For a long time it was considered unprofessional to mention charges for service. The physician graciously accepted what his patient was able to pay and thought his services were worth. The situation took care of itself, very largely, for the reason that doctors were not then so plentiful and their services, consequently, were very much in need. They would not serve in communities where they were not adequately remunerated. In the complexity of modern civilization, it has become necessary to give much thought and consideration to the economics of medicine. The problem is still one pertaining to ethics, but there are ramifications which call for special consideration outside of that sphere. The American Medical Association has set up a special department, well manned and equipped, for the consideration of all such problems. The Council on Medical Economics of the State Medical Association has the same reason for its existence. It is a long time, overlapping term of office group, hence is in a position to adopt a continuing policy. It has done that.

In the past few years it has dealt with many important problems, including, for instance, medical service under Farm Security Administration. It received two special and important mandates from our last annual session, namely, evaluation of health and accident policies offered the medical profession, and, of great importance, the development of a system of distribution of medical service which will insure medical service for people of small income, and at the same time preserve the personal physician-patient relationship, and in general maintain the principles of medical ethics as they apply. Any other question of importance in connection with the economics of the practice of medicine which may arise, will presumably be referred to this Council.

There are several committees of importance in connection with the administration setup. One of these, the Committee on Collection and Preservation of Records, is of importance in connection with the long cherished ambition of the Association to prepare a comprehensive, complete and interesting history of medicine and medical affairs of the State of Texas. It was anticipated that this committee would spend its time collecting material of interest in this connection. As a matter of fact, it has collected a lot of material, at a cost of several thousand dollars, but its appeal for help from members of the Association have been practically ignored. All the data it has been able to gather have been gathered by people employed to do the gathering. We live in the constant hope that our members will begin to take an interest in this matter, and at least give this committee leads to where such material may be found.

Another of these committees, that of Transportation, has about outlived its usefulness. Formerly it selected official routes to medical meetings here, there and elsewhere, and negotiated terms with the railroads concerned. It can now do no more than select the official route. The terms are all set up by law and by agreement among the railroads themselves.

The Committee on Arrangements for the Annual Session, as the name would indicate, has to do only with such arrangements. It is appointed from nominees of the entertaining county society. Its work is extremely important. It immediately becomes the local staff of the President, the Secretary, and the Chairman of the Council on Scientific Work, in preparing for the annual session. Its decisions must be approved by the officers named.

The Committee on Memorial Exercises prepares the program for and conducts the Memorial Exercises at the annual session each year. It is assisted by a local committee.

The Committee on Revision of Constitution and By-Laws is expected to maintain a constant study of that important instrument and make suggestions each year for any amendments which it may deem advisable. Suggestion for amendment to either the constitution or by-laws made between sessions of the House of Delegates are referred to this committee for consideration.

The Advisory Committee to the Woman's Auxiliary has been set up to serve as a connecting link between these two most important and necessary coördinating organizations. This committee is presumed to be well informed as to the activities of the State Medical Association, and being so informed is in a position to advise the Woman's Auxiliary as to how, where and when that organization can help. While the Woman's Auxiliary is essentially an autonomous organization, and must remain so, its primary purpose of existence is to aid and assist the State Medical Association in its work. It is very necessary that the organization know what it is to do, and how it must do it to be of real help. Otherwise, there would be very frequent and sometimes embarrassing crossing of wires.

The Committee on Military Affairs for the first time in many years has become a most important cog in the machinery. This committee will have in charge, under the direction of the representative of the State Medical Association, who happens to be its chairman, and the American Medical Association Committee on Medical Preparedness, the whole problem of medical preparedness. The latter committee is at this time making a survey of the medical profession throughout the United States, through means of a questionnaire which has been sent to each physician licensed to practice medicine. This survey will produce data which will disclose to the government just what its reservoir of medical service contains. Knowing this, the government should experience little difficulty in distributing the service of physicians so as to produce the greatest good for the greatest number. There is a great deal of work to be done in this connection in county and state medical organizations. It is the duty of this committee, through the agency already mentioned, to attend to all of that. If its work is well done, the doctors of Texas should have the maximum opportunity to serve in capacities best suited to them, and in which they can render the best possible service.

The committee appointed as liaison between our Association and the Lone Star State Medical, Dental and Pharmaceutical

Association, the negro organization recognized by our Association, has the very great responsibility of bringing the negro and the white physicians in our state into maximum accord in things professional. It is an ex-officio group, comprising the most responsible officials of our Association. This is a new committee. It was appointed under the presidency of Dr. Bertner, year before last. As a matter of fact, the committee has already rendered very valuable service, and is in a position to render still greater service. The negro physician is here, and doubtless here to stay. Unquestionably, he is doing the best he can to render real medical service, and in accordance with our conception of the principles of medical ethics. Considering the difficulties we experience among ourselves in dealing with problems of this character, we can but conclude that the negro physician needs help, and there is nobody else to help him. The problem would not be of any considerable importance except for the social implications involved. That science knows neither race nor creed must be considered a truism. Even so, we must look upon our situation realistically. Realism, whether properly or improperly so, often temporarily changes idealism. It is hoped and expected that this committee will eventually bring our medical ship to an even keel in this particular sea.

The scientific work of the Association has for some years been accomplished under the direction of our Council on Scientific Work. This is another committee with an overlapping, long-time term of office basis. It has an ex-officio membership comprising the officers of scientific sections, which group changes yearly. It is an ideal setup, and its work has heretofore been very satisfactory, indeed. In practice, officers of scientific sections, who, in the final analysis are responsible for their programs, compile their programs and submit them to the Council as a whole. The Council justifies them, makes rearrangements and redistributions of contributions, and in general plans for their presentation. Any problem in connection with the scientific work of our annual sessions is referred to this Council for solution. It reports to the House of Delegates.

The Committee on Scientific Exhibits works in coöperation with the Council on Scientific Work. The function of this committee is confined to the organization and presentation of scientific exhibits at our annual sessions. It is allocated space for this purpose, and in turn it reallocates the space to our members who would present scientific exhibits. An effort is made to bring the scientific exhibits into support of the programs of the scientific sections.

In compiling the programs for the scientific sections, and setting up the scientific exhibits, each member of the State Medical Association must be given full and free opportunity of contributing.

The Committee on Cancer is an overlapping, long-time term of office committee, originally set up to study cancer in all of its ramifications. It was considered that the committee might undertake original research, or delve into the problem of cancer in any particular. It might join other agencies in publicizing the disease, that the cancerous patients might be brought into the hands of physicians capable of treating them satisfactorily. The committee has been doing that. It is now ex-officio a part of the Committee on Postgraduate Medical Education, and may be useful in lining up refresher and postgraduate courses on the subject.

The Committee on Mental Health must deal with any problem along such lines, which may be referred to it or with which it may come into contact. This committee has considerable leeway in the matter of its activities. It has some legislative responsibilities, which, of necessity, is exercised through the legislative committee proper. It is ex-officio a part of our Committee on Postgraduate Medical Education. The work of this committee is to be supplemented this year by a temporary committee, appointed at the request of the preceding Committee on Mental Health. This committee will study the laws pertaining to the commitment of the mentally ill to state hospitals, for restraint or treatment, and through our Committee on Legislation attempt their amendment to a more humane and scientific end. This has been a problem of this committee for a good many years. Many attempts have been made to solve it. They have all come to no good end. It is hoped that a small, specially qualified committee, will be able to bring about a reform in this particular, through an amendment to our constitution if necessary.

The Committee on Fractures is in the same category with the above named committee, devoting its attention to the problem of fractures. In carrying out its purposes, the committee has for the past several years set up booths in our scientific exhibits, in which the latest and best methods of handling fractures are shown by practical demonstration.

The Committee on Maternal and Child Health was originally a combination of two committees, one on maternal and the other on child health. They were combined some years ago, when the State Health Department wanted a single group for advisory pur-

poses in connection with a refresher course along these lines which it was able to finance. It seemed desirable that these courses be presented under the joint sponsorship of the State Medical Association and the State Health Department. The State Medical Association was and is represented by the Board of Councilors in arranging the meetings, the scientific programs being prepared under the direction of this joint committee. The committee is now a part of the Committee on Postgraduate Medical Education.

The Committee on Tuberculosis is also a part of the Committee on Postgraduate Medical Education, and functions in its line exactly as do the committees above mentioned. This committee also has a legislative function, but as in the other cases mentioned in this category, its legislative work must be in cooperation with the legislative committee.

The Committee on Venereal Diseases was appointed at the request of the State Health Department, when the health departments of the country undertook a coördinated program of prevention of venereal diseases. There were so many, and such serious ethical and professional implications in this work that it had to be approached with great caution. It could not be otherwise, reaching, as it does, deeply into the practice of curative medicine. The State Health Department did not wish to offend in such matters, hence the need of a strong, wise advisory group. In addition, there were, of course, many opportunities for study of the very serious problem of venereal diseases, which study this committee is supposed to undertake.

The Committee on Industrial Health has likewise been an advisory group of the State Health Department. It has other opportunities for service, of course, but that has heretofore been the main idea. The work of this committee is likely to become very important in connection with our preparations for national defense. Industry has taken its rightful place in such preparations, and one of the most important factors involved is the health of the workmen.

The Committee on Malaria, contrary to common view of the matter, has a rather widespread and definite field for its activities. This committee is likewise an advisory one for the State Health Department. It is also ex-officio a part of the Committee on Postgraduate Medical Education.

Another important committee having study, teaching and advisory application, is the Committee on Pneumonia. This committee was appointed primarily at the request of the State Health Department, in view of the campaign the department was making in the interest of the suppression and amelioration of pneumonia. Like the other committees which have been in coöperation with the State Health Department, this committee has helped the department to set up a very definite program, and like the other programs, entirely in coöperation with county medical societies.

It will be noted that each of the committees appointed to serve the State Health Department in an advisory capacity, has in its membership a representative of the State Health Department. They are all members of the Association, but are ex-officio members of their committees.

The Committee on Postgraduate Medical Education was created by our House of Delegates at Dallas, in May. The creation of the committee was in response to a recommendation by President Dr. Reeves, and also by the chairman of a prior committee, Dr. F. P. Miller of El Paso. The grouping of several committees as ex-officio members of this committee, was brought about through an effort of the President to relate the work of the committees concerned in caring for the requirements of the State Health Department. It seemed advisable to do that, both in the interest of public health service thus to be rendered, and the traditions and ethics of the medical profession. That had been done during the year, and it seemed advisable to make the arrangement permanent. In the future, whenever there is money available, from whatsoever source, for the promotion of refresher, or postgraduate courses in our medical colleges, or anything of the sort, this group can be called into action immediately, and should be in a position to serve adequately and satisfactorily.

The Committee on Health Problems in Education was originally set up to serve with like committees from the educational and teachers associations, nationally and locally. For a time it functioned in that connection. Of late years it has not been able to do very much, for the reason that its services have not seemed to be in demand by the educational authorities. The committee was organized on a long-time term of office basis, anticipating that it might be continuously in the service. It was considered that there was ample room for service of this sort. It may be that the usefulness of this committee will be enhanced by the recognition of its importance by educational authorities. The committee at least represents a very fine gesture on our part. Possibly our teachers, and educational authorities in general, are so busy with their own specialized work that they cannot realize the need of services such as this committee can render.

The Library Endowment Committee is a

recent institution. It has a special and very important service to perform. It is the duty of this committee to secure contributions to the support of the Library of the State Medical Association, which is to be done through the recently set up Texas Memorial Medical Library Association. This committee cannot, of course, exclusively through its own activities, locate any and all persons in the State of Texas who would care to render a service in this way. Our readers can do their part by notifying the committee of any of their acquaintance who might be willing to make contributions to such a worthy cause. The committee can then arrange for a proper presentation of the facts in the case and the incident opportunities for a worthwhile service to the public welfare.

Our Advisory Board to the Society of Medical Technologists was appointed at the request of that particular group. It seems that our medical technologists desire very much to serve in close accord with the medical profession, and with due regard for its traditions and its ethics. Hence the need of this committee, and hence the request of the technologists that it be appointed.

Our special delegates to other organizations could, if they would, render a real service. Some of them do, some of them don't. Some of them have opportunities of doing so, while others do not have such opportunities. These special delegates are appointed only to those organizations in the work of which we have some interest. We invite those organizations to return the compliment. Some of them do, but most of them don't. Through such delegates we could pass along suggestions and observations of mutual interest, some of them, perhaps, of great importance. Through such representatives we could establish a relationship in connection with matters of mutual interest which would enable us to act as one organization, thereby redoubling our usefulness and opportunities for service.

It will be a real service if a number of our readers will take time out and make suggestions to our officers and members of our councils and committees, as to how they may enhance the value of their service, respectively and collectively.

The officers of scientific sections are listed with the officers and committees of the Association, that they may be available to our readers throughout the year. It will be remembered that the officers of scientific sections are ex-officio members of the Council on Scientific Work. We have already referred to the duties of that Council. We are reminding our readers that if any of them desire to contribute papers to the programs of our scientific sections, they should with as little delay as possible advise the officers of the sections concerned. Better headway will be made if in such requests for positions on the program, a rather full account be given of the ground the proposed paper is to cover, and perhaps, even, how the ground is to be covered. Section officers are freighted with the responsibility of building for the consideration of the Council on Scientific Work, well balanced programs, covering as nearly as possible the important and topical phases of medicine. Other things being equal, section officers very much desire to distribute as widely as possible the opportunity of appearing on the program. It is the right of each member of the Association to aspire to such distinction, and it is the purpose of the Council on Scientific Work to encourage our members in the production of medical literature; but at the same time the Council, including the officers of scientific sections, must consider the greatest good of the greatest number, which is our membership in general and not in particular. Of course, any prospective author who is in doubt as to where his offer should be directed, may communicate with the Central Office of the Association, at Fort Worth, in the assurance that proper disposition will be made of his communication.

The list of officers, councils, committees, delegates and officers of scientific sections is presented herewith:

OFFICERS

Preston Hunt, President, Texarkana (one year).
N. D. Buie, President-Elect, Marlin (one year).
G. A. Schenewerk, Vice-President, Dallas (one year).
James J. Gorman, Vice-President, El Paso (one year).
S. J. R. Murchison, Vice-President, Fort Worth (one year).
Holman Taylor, Secretary, Fort Worth (three years).
K. H. Beall, Treasurer, Fort Worth (three years).

BOARD OF TRUSTEES

S. E. Thompson, Chairman, Kerrville (three years).
W. R. Thompson, Secretary, Fort Worth (five years).
J. B. McKnight, Sanatorium (four years).
W. B. Russ, San Antonio (two years).
John T. Moore, Houston (one year).

BOARD OF COUNCILORS

First District, Ralph Homan, El Paso (two years). James J. Gorman, El Paso, Vice-Councilor.
Second District, F. E. Hudson, Stamford (one year). W. E. Ryan, Midland, Vice-Councilor.
Third District, E. A. Rowley, Amarillo (three years). G. T. Vinyard, Amarillo, Vice-Councilor.
Fourth District, O. N. Mayo, Brownwood (two years). Robert E. Windham, San Angelo, Vice-Councilor.
Fifth District, C. E. Scull, San Antonio (three years). W. H. Hargis, San Antonio, Vice-Councilor.
Sixth District, J. G. Webb, Mercedes (three years). C. P. Yeager, Corpus Christi, Vice-Councilor.

Seventh District, R. T. Wilson, Austin (one year). J. R. de Steiguer, San Marcos, Vice-Councilor.
Eighth District, Herman C. Eckhardt, Yorktown (one year). Harry H. Brown, Jr., Yoakum, Vice-Councilor.
Ninth District, Judson L. Taylor, Houston (one year). Charles T. Stone, Galveston, Vice-Councilor.
Tenth District, A. E. Sweatland, Lufkin (one year). William H. Warren, Center, Vice-Councilor.
Eleventh District, A. L. Hathcock, Palestine (two years). T. M. Jarmon, Tyler, Vice-Councilor.
Twelfth District, H. F. Connally, Waco (three years). S. L. Witcher, Clifton, Vice-Councilor.
Thirteenth District, T. C. Terrell, Fort Worth (two years). J. H. Caton, Eastland, Vice-Councilor.
Fourteenth District, M. L. Wilbanks, Greenville (two years). H. Leslie Moore, Dallas, Vice-Councilor.
Fifteenth District, C. A. Smith, Texarkana (three years). R. K. Womack, Longview, Vice-Councilor.

Delegates to A. M. A.

H. R. Dudgeon, Waco (one year).
A. A. Ross, Lockhart (one year).
E. H. Cary, Dallas (one year).
Holman Taylor, Fort Worth (term expires).
Felix P. Miller, El Paso (term expires).
Sam E. Thompson, Kerrville (term expires).

Alternates

E. W. Bertner, Houston (one year).
H. Leslie Moore, Dallas (one year).
J. J. Crume, Amarillo (one year).
R. B. Anderson, Fort Worth (term expires).
Guy F. Witt, Dallas (term expires).
Preston Hunt, Texarkana (term expires).

Council on Medical Defense

W. D. Jones, Chairman, Dallas (three years).
Holman Taylor, Secretary (ex-officio), Fort Worth.
A. P. Howard, Houston (four years).
W. L. Baugh, Lubbock (two years).
W. A. King, San Antonio (one year).

Executive Council

Ex-officio, the President (Chairman), and the Secretary (Secretary) of the Association; President-Elect, Vice-Presidents, Board of Trustees, Board of Councilors, and the Legislative Committee.

Council on Scientific Work

Ex-officio, the President and Secretary, and Officers of Scientific Sections.
A. C. Scott, Sr., Chairman, Temple (five years).
Jack Daly, Fort Worth (four years).
C. C. Foster, Granger (three years).
W. C. Tenery, Waxahachie (two years).
W. F. Starley, Galveston (one year).

Council on Medical Economics

C. C. Cody, Chairman, Houston (five years).
Thomas B. Bond, Fort Worth (four years).
C. C. Foster, Granger (three years).
W. C. Tenery, Waxahachie (two years).
W. F. Starley, Galveston (one year).

Committee on Legislation

H. W. Cummings, Chairman, Hearne (one year).
Preston Hunt (ex-officio), Texarkana.
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IRON REQUIREMENTS IN CHILDHOOD AND ADULT LIFE*

FRANK J. HECK, M. D.
Division of Medicine, The Mayo Clinic
ROCHESTER, MINNESOTA

It is difficult to determine when iron was first used in the treatment of disease. In the seventeenth century Sydenham and Willis described the efficacy of iron therapy in chlorosis, and in 1746 Menghini placed the use of iron on a sounder basis by discovering that this element is a constituent of the blood and that it is contained in the protein portion. A large amount of work has been done on iron metabolism in the past fifty years but there are still a great many gaps in our knowledge although the introduction of recent experimental methods will undoubtedly serve to clear up some of these. Iron is present in most, if not all, cells and in the average human adult the total amount of iron in the circulating blood is estimated at about 2.65 Gm. In addition to the iron in the hemoglobin, there is a fairly large amount of reserve material, capable of being regenerated into hemoglobin, which is present in various storage sites, chiefly in the liver, spleen, lymph nodes, kidneys and bone marrow. The amount of iron stored in these organs may under certain circumstances equal that in the blood, for in certain human anemias, such as hemolytic jaundice and pernicious anemia in relapse, an excess of iron is found, chiefly in the liver and spleen. Such iron is readily available for formation of hemoglobin and this is borne out by the fact that it is seldom necessary to give patients with hemolytic jaundice or pernicious anemia anything in the way of iron therapy to relieve them of even severe anemia.

The amount of iron which is stored in the body in the average normal adult can only be roughly estimated, although it is a common experience that individuals who have had severe gastro-intestinal bleeding and whose hemoglobin has been reduced to 50 per cent or less have a rapid return to normal values even though no iron medication has been given. From this it is ordinarily considered that the amount of stored iron should equal at least half of the total circulating iron. The third form in which iron appears in the body is as tissue iron which is not available for blood formation. Very little is known of the total amount of this iron in the body but the figure is usually placed at about 0.325 Gm. Adding together the amount of iron in the circulating blood,

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which is 2.65 Gm. plus the iron in storage or about 1.32 Gm., plus unavailable tissue iron, gives us a total of about 4.3 Gm. for the total amount in a normal healthy adult. This figure is considerably higher than the value of 3 Gm. estimated by Sherman.

The exact sites of absorption and excretion of iron are unknown. It is absorbed probably in large part by the upper portion of the small intestine. Likewise, we have no accurate information as to whether iron is absorbed in the ferrous or in the ferric form. Hahn expressed the opinion that the greater amount of all of the absorption of iron normally occurs in the stomach and possibly the upper part of the duodenum. Mettier and Minot have shown that the reticulocyte response in hypochromic anemia following oral administration of ferric ammonium citrate in acid buffer solution is slightly greater than when given in alkali buffer solution. It has also been shown that an iron-rich diet had practically no effect on formation of hemoglobin during periods of alkalinization but that after alkalis are discontinued there is a marked effect comparable to that obtained by adequate therapy with inorganic iron. A number of conditions in the upper part of the bowel favor the formation of insoluble basic iron compounds. However, difficulties may be encountered with both ferrous and ferric salts. Poor absorption may be obviated by the introduction of the element by other routes.

Robscheit-Robbins and Whipple have shown that the efficacy of iron feeding depends on the actual need for the element. They have also shown that iron salts, whether in the ferrous or ferric state or reduced iron, are utilized with equal facility by the dog in anemia due to hemorrhage. The experimental basis for our present large doses of iron salts is due to the work of Whipple and Robscheit-Robbins, although Blaud in 1832 advocated the administration of large amounts of iron and Meulengracht early in this century advocated a similar procedure. Whipple and Robscheit-Robbins found that if iron salts were fed at a level of 40 mg. of iron per day about 35 per cent was utilized but if fed at a level of 400 mg. per day, although only 4 to 7 per cent of the ingested iron was used, this gave a larger amount of absorption for regeneration of hemoglobin. If iron is given intravenously there is a quantitative return of the element as hemoglobin.

In considering iron metabolism it is necessary to determine the amount of iron contained in the diet as well as the availability of this iron for conversion into hemoglobin. The total amount of iron contained in any food substance bears no particular relationship to its suitability for formation of hemoglobin. An attempt has been made through the use of alpha alpha di-pyridyl to determine how much of the iron in a given food was available for regeneration of hemoglobin. There are many food substances in which the availability of iron is less than 50 per cent so that even with a high iron diet the rate of hemoglobin regeneration may be relatively slow. According to Heath and Patek, clinical experience has shown that with a normal diet alone hemoglobin regeneration occurs at the rate of 1 per cent of hemoglobin for each 25 mg. of iron retained. If 50 per cent of the iron in a normal diet is absorbed, then three to four days would be required to build only 1 per cent of hemoglobin.

There has been a good deal of argument in recent years as to the necessity for the simultaneous administration of copper and iron. There seems to be no reasonable doubt as to the necessity for the presence of copper in the metabolism of iron. The work of Hart, Steenbock and Elvehjem,[2, 6] which has been corroborated by many others, has shown that the administration of pure iron salts alone to rats subsisting on a milk diet did not prevent or cure anemia but that the addition of a trace of copper was necessary. The amount of copper required is very small and its occurrence in foods is so widespread that from a practical standpoint there seems to be little indication for the inclusion of this element in anemia therapy. Schultze in a recent article, however, has pointed out that this viewpoint may not be entirely justified and that, while the possibility of a deficiency of copper occurring in man is somewhat remote, still it is a point which cannot be disregarded.

As I have mentioned before, an attempt has been made to determine the availability of iron in various foods according to the amount of total iron which reacts with di-pyridyl. This reagent does not react with hematin iron and the blame for poor absorption of iron-containing materials would be placed on the existence of part of it as hematin. While it is true that when hemoglobin has been fed there is very poor absorption of iron, yet iron salts such as ferric chloride, although giving 100 per cent reaction with di-pyridyl, are seldom utilized even under the best conditions to a greater extent than about 40 per cent. Just what factor determines whether or not iron will be absorbed in the normal healthy individual cannot be stated; when there is a need by the organism for iron it is apparently absorbed and stored. Otherwise it is mostly passed through the gastro-intestinal tract, but the factor or factors involved in this are still undetermined.

NORMAL PHYSIOLOGIC REQUIREMENTS

In the male iron is required for growth; in the female for growth, menstruation, pregnancy and lactation. The exact sites of absorption and excretion of iron are unknown but it is probably absorbed in the upper part of the small intestine. The iron content of the urine is very small. Sherman has estimated the dietary standard of man to be about 12 mg. of iron per day. The iron content of the daily diet of adults in this part of the world corresponds roughly with this. From modern studies on iron metabolism it has been concluded that to maintain a normal man in iron balance an intake of 5 mg. daily is required and in women between 12 and 14 mg., the latter including the loss of iron in the menses.

As will be pointed out, the iron requirement varies in the two sexes and with different ages. From birth to puberty the amount of iron required is essentially the same in the two sexes. During the period of growth iron is needed chiefly for formation of the increasing circulatory hemoglobin. Relatively the greatest period of growth occurs during the first two years of life and since blood volume is to a large extent a function of surface area, there is a large need for hemoglobin metabolism. Data obtained from various sources and presented by Patek and Heath calculate the annual iron requirement of the male for the first year at 195 mg. and for the second year at 112 mg. From the second to the tenth years the amount varies between 70 and 98 mg. and it then increases gradually to 198 mg. about the fourteenth year when at puberty there is the second greatest period of growth and the iron requirement increases to about 300 to 350 mg., dropping off at the seventeenth year to about 180 mg. and down to nothing by the twenty-first year, the assumption being made that growth is complete by the twenty-first year. Thereafter, assuming normal conditions, there should be no physiologic need for iron.

In the female the iron requirement approximates that in the male until puberty when we have the added factor of menses so that the needs for iron are increased by an amount equal to that lost by the menses. Figures for the amount of blood lost with each period vary between 33 cc. and 50 cc. in a number of subjects studied by three different authors. However, it must be admitted that there are probably a fair number of women who lose much more than this and yet who consider themselves to be perfectly normal. This was well demonstrated in a study by Fowler in which he found blood loss up to an average of 258 cc. in a group of women considering themselves as normal. In the female the iron requirements between the fourteenth and nineteenth years vary between 424 and 498 mg. and then drop to about 300 mg. after the twenty-first year, the amount of iron required for thirteen periods, assuming a loss of 50 cc. of blood per period.

In pregnancy and at parturition the loss of iron was assumed to be twice the iron content of the fetus or at least 0.374 Gm. If, however, the iron content of the average newborn infant is 0.375 Gm., the value published by the White House Conference on Child Health and Protection,[19] then the iron requirements may be considerably higher, possibly as much as 0.600 Gm. Calculating the iron requirement of the female from birth to forty-seven years, the average age of the menopause, we find a total of 12.2 Gm. or four times the iron requirement in the male. The amount of iron lost by lactation has not been included in this figure but from analyses by the Rowlett Research Institute,[12] assuming 500 cc. of milk given daily for a year, the iron loss would be about 310 mg. or an amount comparable to the amount lost in a year by menstruation. To this amount must also be added the needs in multiple pregnancies and periods of lactation.

As may be seen from the foregoing, growth, loss of blood, pregnancy and lactation, and in addition restricted diet and gastro-intestinal disorders interfering with absorption may be responsible for iron deficiency.

In the period of growth one would expect anemia due to deficiency of iron to occur more frequently in infancy and at the time of puberty. The anemia occurring in infancy is seen more frequently when the infant has been fed a diet exclusively of cow's milk, since this food contains only small amounts of iron. Another factor which may be responsible for the occurrence of anemia in infancy is that if the mother is deficient in iron she may endow her infant with an insufficient supply of iron so that there are no reserve stores on which the infant may draw. During the latter few months of pregnancy the iron stores are laid down by the fetus and, if prematurity occurs, then there is inadequate storage. It is important that the milk feedings be supplemented by iron-containing foods such as meat, eggs and vegetables. Infections in infancy may act in two ways: first, by interference with the appetite so that there is a relatively small intake of food, and secondly, it has been shown that infections interfere with the metabolism of hemoglobin so that while adequate iron stores may be available the normal metab-

olism of iron does not occur. Therefore, in following through a case of anemia in infancy we must consider, first, whether or not the mother had adequate iron stores; second, whether or not the infant was born prematurely; third, whether or not there had been a diet exclusively of cow's milk, and fourth, whether or not an infection had intervened.

Strauss has shown that there is no difference between the percentage of hemoglobin at birth of infants born of anemic mothers and those born of nonanemic mothers but that moderately severe anemia developed in the former group during the first year of life. It should be re-emphasized that, relatively speaking, growth is very great during the first year of life since the average increase in weight is to three times the birth weight and the increase in blood volume relatively the same. Anemia of this type, as a rule, responds very satisfactorily to the ingestion of iron. The addition of copper, particularly in cases in which the infant is on a milk diet exclusively, would seem to be well warranted since even with adequate iron stores the anemia does not respond unless there is sufficient copper present.

The next period in which anemia due to deficiency of iron would occur is, of course, at puberty and here in addition to the growth factor we have the additional factor of blood loss in the female. At the present time we hear very little of chlorosis and it is a disease which is now only rarely encountered. Here all of the factors must be considered which apply in infancy, and many of these individuals in whom anemia develops at this age have been on relatively inadequate diets so that it has not been possible for them to lay up iron stores. In many instances, even though menstruation may be somewhat excessive, the anemia produced thereby can be adequately controlled by the ingestion of iron salts. It is quite apparent that there are marked differences in different individuals, since we see some women who over many years' time have continued to have excessive blood loss at the time of their menses but whose hemoglobin has remained within normal limits.

The next group which we can consider are the hypochromic anemias of blood loss and these may occur at any age and in either male or female. Gastro-intestinal lesions are, of course, a common cause for anemia of this kind and in investigating an iron deficiency in the male it should always be considered organic and on the basis of an organic lesion until proved otherwise. Witts has reported a small group of cases of chlorosis in the male and we have seen two cases of this type at The Mayo Clinic in recent years. These cases have all responded satisfactorily to iron therapy. The investigation of a case of anemia due to deficiency of iron will, of course, depend to a large extent on the severity of the anemia, the age of the patient, whether there is a known source of blood loss, and how carefully the patient can be kept under observation. If one sees a woman who gives a history of recurring anemia over many years' time which has always responded to the administration of iron, then it would not seem necessary to take a series of gastro-intestinal roentgenograms or study the stool for the presence of occult blood.

If one is going to do a really adequate examination he must not only study the stools but must have a complete series of gastro-intestinal roentgenograms provided there is no obvious explanation of the anemia from the history. It is very important to remember that iron is used over and over again in the body and that the actual requirement for iron is practically nil after the period of growth has passed unless there has been loss of blood in one form or another. Therefore, every man with this type of anemia is entitled to a careful and rigid examination, and in women the extent of the examination will have to depend on whether or not the menstrual loss of blood has been sufficient to account for the anemia. After the menopause every anemia of this type in women should be looked on as it is in men.

The blood picture alone can in no way determine whether or not there is iron deficiency since the morphologic picture does not distinguish between a type of anemia due to deficiency of iron and one in which there has been inadequate formation of hemoglobin as the result of an infection or toxemia. It has been pointed out in the previous section that during pregnancy anemia is very likely to occur. The anemia in pregnancy is due to several different factors. In the first place there is an increase in the blood volume which accounts for part of the anemia as the result of dilution of the blood. However, by far the greater portion of the anemia is due to inadequate iron stores so that it seems advisable to give pregnant women iron salts orally more or less routinely in order that they may not only maintain a normal hemoglobin but so that the infant may be endowed with normal iron supplies. The amount of iron required for pregnancy is approximately twice that which would be utilized in a year's menstrual cycles counting thirteen cycles to the year. I have also pointed out the amounts necessary for lactation.

In addition to the group which I have already described, most authorities feel that

there is one group of anemias due to deficiency of iron in women which deserves a special title. This group has been known variously as simple achlorhydric anemia, hypochromic microcytic anemia, chloranemia, chronic microcytic anemia, and so forth. While it is now believed that the great majority of even this group have blood loss as the cause for their anemia, still they present special groups of symptoms not ordinarily found in the anemias. The common symptoms are weakness, easy fatigue, vague abdominal symptoms, and perhaps some glossitis, and the patient may occasionally complain of thin, brittle finger nails which may be flattened or actually concave. Some authors have emphasized the presence of paresthesia in the extremities but so far we have not experienced this particular symptom in any of our cases. On physical examination, in addition to the pallor, the liver edge and spleen are frequently palpable. There is usually achlorhydria or hypochlorhydria and in the blood picture there is moderate or marked hypochromasia and as a rule a tendency to microcytosis. Evidences of regeneration in the erythrocytes are usually not remarkable and the leukocyte picture is usually normal, so that there is no way of distinguishing the picture morphologically from any other case in which blood loss has occurred. Administration of iron salts orally or parenterally results in relatively rapid cure of the anemia with gradual disappearance of the symptoms. At the menopause, with the associated increased bleeding commonly seen in many women, anemia due to deficiency of iron may occur but any anemia of this type in men, or in women after the menopause, should be considered on the same basis as due to blood loss from some organic lesion.

TREATMENT

Since iron is only one of the factors which are necessary for the proper formation of hemoglobin, we must start out by being certain that the patient receives a general, well balanced diet. There should be adequate protein in the form of meat, eggs and milk together with a proper supply of fruits and vegetables so that an adequate vitamin content is provided for. It has been shown that, in the presence of inadequate protein, formation of hemoglobin will be slowed up even when there is plenty of iron present. Of the iron salts which are valuable, it has been shown that the particular form in which the iron is given is not especially important and, as I have mentioned previously, no one has shown the superiority of ferrous preparations over ferric preparations. Iron ammonium citrate, which was used extensively ten to fifteen years ago, now has almost entirely been replaced by other preparations. As far as its ability to form hemoglobin is concerned, it is a perfectly satisfactory preparation but the main objection to it is the relatively large number of gastro-intestinal symptoms which it may produce. About 20 per cent of the patients taking ferric ammonium citrate will have some reaction from it. Furthermore, if it is taken in capsule form it is relatively expensive when given in the dose recommended, which is from 60 to 90 grains (4 to 6 gm.) a day. This preparation may, however, be prescribed in bulk, giving one-half teaspoonful (2 cc.) in water three times a day and then the cost is very low.

Reduced iron is also quite satisfactory and can be given at a cost of between $1 and $1.50 a month. The dose recommended is from 20 to 40 grains (1.3 to 2.6 gm.) a day. In the last few years ferrous sulfate has been extensively used. This is an inexpensive preparation; it can be administered for from 80 cents to $1 a month, and when given in a dose of from 15 to 25 grains (1 to 1.6 Gm.) a day is usually followed by a very prompt response in hemoglobin formation. So far I have not found an iron preparation which could be said to be entirely free from gastro-intestinal reactions. The important thing in iron therapy is that an adequate supply of metallic iron be given to the patient, the particular form in which it is given not being so important as the amount.

In the treatment of anemias of this kind there have been a number of supplements which have been advocated. The use of hydrochloric acid seems to be desirable in some instances, particularly where there is achlorhydria, and there has been no response to iron therapy, and the addition of dilute hydrochloric acid may be followed by a satisfactory increase in hemoglobin. It is, however, unnecessary to give hydrochloric acid routinely to these patients who have achlorhydria. In addition to this, liver extracts of both the water-soluble and alcohol-soluble type have been recommended as being of advantage in treatment. There is not enough evidence to show that liver extract of the type used in pernicious anemia is of sufficient advantage so that one is warranted in putting these patients to that expense. In addition to this, various commercial houses have preparations which are combinations of antianemic material, such as ventriculin or liver extract-stomach combinations, together with added iron which they are advertising to the profession with extravagant claims as to their therapeutic effect.

In addition to the ordinary extract there is a substance contained in liver which is insoluble in 70 per cent alcohol which has been shown by Whipple to play some part in hemoglobin metabolism. This secondary anemia liver extract does have some effect apparently which cannot all be explained on the basis of the amount of iron it contains. However, the beneficial effect of the secondary anemia liver extract is relatively slight as compared with that obtained from administration of adequate doses of iron salts, so that here again the expense of using such a preparation is out of all proportion to the benefit which can be obtained.

From an experimental standpoint there has recently been described what is called "factor I"[3] or "antidermatitis factor B-6." A deficiency in this factor causes the production of hypochromic microcytic anemia in experimental animals which is promptly relieved when the substance is added to the diet. Not enough work has been done to know whether this substance is of significance in man.

The administration of copper may be quite necessary in infancy or in highly specialized cases in adult life but for the most part in those individuals on an adequate diet there should be a sufficient supply of copper present, since this is needed in only very small amounts. Most of the commercial iron preparations contain copper as an impurity.

SUMMARY

In the male iron is required for growth; in the female for growth, menstruation, pregnancy and lactation. In the period of growth anemia due to deficiency of iron may be expected more frequently in infancy and at puberty. The hypochromic anemias of blood loss may occur at any age and in either male or female. Gastro-intestinal lesions are a common cause for anemia of this kind. The blood picture alone cannot determine whether there is iron deficiency. During pregnancy anemia is very likely to occur. In the treatment of anemia a well balanced diet with an adequate supply of protein and vitamins is necessary. The important thing in iron therapy is that an adequate supply of metallic iron be given to the patient, the particular form in which it is given not being so important as the amount.

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SECOND EVALUATION STUDY OF SEROLOGIC TESTS FOR SYPHILIS

More than five years ago the Committee on Evaluation of Serodiagnostic Tests for Syphilis, in cooperation with the United States Public Health Service, conducted a study to evaluate original serologic tests for syphilis or modifications thereof in the United States. The results of this study were published shortly after the investigation was completed.[1]

Consideration is now being given by the Committee to the organization of a second evaluation study of original serologic tests for syphilis or modifications thereof within the next year. If the need for an investigation of this kind seems to justify the cost, invitations will be extended to the authors of such serologic tests who reside in the United States, or who may be able to participate by the designation of a serologist who will represent them in this country. The second evaluation study will be conducted utilizing methods comparable to those employed in the first study.[2]

Serologists who have an original serologic test for syphilis or an original modification thereof and who desire to participate in the second evaluation study should submit their applications not later than October 1, 1940. The applications must be accompanied by a complete description of the technic of the author's serologic test or modification. All correspondence should be directed to the Surgeon General, United States Public Health Service, Washington, D. C.

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THE HIPPURIC ACID SYNTHESIS TEST FOR LIVER FUNCTION*

D. L. CURB, M. D.
GALVESTON, TEXAS

Quick[3] has introduced a method of studying the liver function based upon the ability of that organ to combine orally administered sodium benzoate with the amino-acid glycine to form hippuric acid, which is excreted by the kidneys as a non-threshold nitrogenous substance. The rate of this transformation is determined by the rate at which the liver is able to furnish glycine from endogenous sources. The technique as outlined by Quick,[3, 4] is quite simple. He gives the normal range as 2.55 to 3.45 Gm. hippuric acid excreted, expressed, however, in terms of benzoic acid. Lipschutz[2] has recently introduced a modification of this test employing the intravenous injection of a smaller dose of sodium benzoate, and collection of the urine for a shorter period; the normal given by him is 0.80 Gm. or more, expressed as benzoic acid.

Certain factors may interfere with the accuracy of the test, and must be controlled. There must be normal excretory function of the kidneys, ability to completely empty the bladder, and exclusion of exogenous sources of glycine. In addition, with the oral test, proper absorption from the intestinal tract must be assured. Several of our patients were nauseated by the test dose and vomited. The test is apparently safe, sodium benzoate being an innocuous substance. When given intravenously, the subjects often notice a vasomotor flushing reaction, and occasionally abdominal cramps momentarily; one of our patients had a convulsion five minutes after the injection was completed; he was an epileptic patient, and it is possible the occurrence was a coincidence, but it is felt that it should be reported.

Use of the hippuric acid test has now been reported by a number of authors, with varying findings. In *jaundice*, Quick[3, 4] reported marked impairment in the acute catarrhal variety and in toxic hepatitis, while in obstructive types there were inconsistent results. Snell[6] reported similar results, stating that the test would not differentiate obstructive from intra-hepatic jaundice. Boyce and McFetridge[1] found results even lower in obstructive than in non-obstructive jaundice. Yardumian and Rosenthal,[7] on the other hand, stated that they were able to differentiate between obstructive and non-obstructive jaundice, since in the former, the test gave normal results. In *cirrhosis*, Yardumian and Rosenthal[7] found impairment of hippuric acid excretion in their cases; Quick,[4] in two cases found impairment also. In *malignant tumors* of the liver, Quick[4] found an impairment of function in eleven of thirteen cases, and Yardumian and Rosenthal[7] reported similar results. In *cholecystitis* without jaundice, Quick[4] found normal results, as did Yardumian and Rosenthal.[7]

One of the more interesting applications of this test has been that of Boyce and McFetridge,[1] who used it in connection with the study of liver function before and after various types of operation, with all types of anesthesia. They found that in a very high proportion of patients with any type of major surgical procedure, there was a profound drop in liver function following the operation, which took days or even weeks in returning to normal. They also used this test on patients with hyperthyroidism before and after operation, showing that impairment of liver function existed in many hyperthyroid patients, that it could be improved by the period of preparation with iodine, and that there was a profound drop in function following thyroidectomy, which took some time to return to normal. They pointed out that in six patients who died of thyroid crisis, autopsy showed severe hepatic degeneration.

MATERIAL STUDIED AT THE JOHN SEALY HOSPITAL

In this study, the hippuric acid synthesis test was applied to a total of 121 subjects; ninety-one tests were performed on these subjects by the oral method, and 123 by the intravenous method of Lipschutz.* The laboratory determinations were all made by the same person, the writer. For discussion of results, the patients were divided into groups as seen below.

CONTROLS

The controls, fifty-four in number, purposely included very few strictly "normal" individuals, but were patients with a variety of medical and surgical maladies on the wards and in the outclinics, leaving out any who had any clinical or laboratory evidence of disease of the liver, heart, or kidneys—diseases that might be expected to influence the results of the test. None were acutely ill.

RESULTS

(1) The oral test: Forty-one of the control group were tested by the oral method, and of them, 31 (75 per cent) excreted 2.55 Gm. or more of benzoic acid. Of ten who excreted less, seven were rechecked by the intravenous

*From the Department of Practice of Medicine, The University of Texas, School of Medicine, Galveston.
*Read before the Section on Clinical Pathology, State Medical Association of Texas, Dallas, May 15, 1940.

*The ampoules of sodium benzoate solution for intravenous use employed in this study were kindly furnished by the Loeser Laboratories, New York City.

method, and six of this seven gave normal results when so checked. Thus it can be said that the great majority of the patients in this group either gave normal results with the oral test, or if not, when re-checked by the intravenous method, gave normal results. There was, however, a discrepancy, in that there were four patients who gave normal results by the oral method, yet gave *low* results by the intravenous test; study of the circumstances revealed situations which might possibly explain the inconsistency in each instance, but nevertheless the discrepancy is being reported.

(2) The intravenous test: Forty subjects had this type of test, including twenty-eight who also had oral tests included in the group above, and twelve who had the intravenous test alone; the latter twelve all gave normal results.

PATIENTS WITH LIVER DISEASE

Twenty-three patients with definite liver disease were divided as follows:

Jaundice:

(1) *Hepato-cellular jaundice*: This group includes 6 cases of so-called "acute catarrhal jaundice." All had an icterus index of more than 60, and a direct van den Bergh. None was very ill, and in none except case 62 did jaundice last longer than six weeks. The results are shown in table 1.

TABLE 1.—*Acute Catarrhal Jaundice.*

Case No.	Oral H. A. S. Test	I.-V. H. A. S. Test	Galactose Tolerance	Highest Urobilinogen
14	2.45	1.19	7.13	+1:30
24	1.20	1.00	5.7	+1:20
25		0.87 0.88	2.43	+1:32
34		0.66 0.24	Trace	+1:200
62		1.39 0.80	5.3	+1:10
74		1.20*	0.106*	+1:20

*Tests were done late in the course of the illness, and so would not ordinarily be expected to be positive.

TABLE 2.—*Toxic Jaundice.*

Case No.	Etiology	Oral H. A. S. Test	I.-V. H. A. S. Test	Galactose Tolerance	Highest Urobilinogen
1	Arsenic*		0.73		Neg.
8	Arsenic		0.22	3.66	+1:60
10	Sulfanilamide	1.05	0.33 0.41 1.24†	3.88 4.94 2.40	+1:100
33	Arsenic		0.14 0.48	4.8	+1:20
65	Sepsis		0.46	Trace	+1:20

*Mild case, jaundice slight.
†Increased excretion hippuric acid, and diminished galactose excretion, both paralleled clinical movement.

Also included in the group of hepato-cellular jaundice were five cases of toxic jaundice. These are shown in table 2.

It is apparent from studying tables 1 and 2 that in the catarrhal jaundice group there is no definite consistency in the three liver function tests used, and they did not seem to parallel the severity of the jaundice, either.

In the toxic group, in which presumably the liver parenchyma was more severely damaged, the hippuric acid synthesis showed impairment in each instance; the galactose tolerance was normal in one, not done in another, and showed impairment in the other three. It should be stated, however, that when these liver function tests are interpreted in the full light of the clinical picture of the patient, and particularly the stage of the disease, its severity, and so forth, they yield more information than when simply tabulated as isolated data.

(2) *Obstructive jaundice:* There were three cases in this group, and the data pertaining to them are given in table 3.

TABLE 3.—*Obstructive Jaundice.*

Case No.	Diagnosis	Oral H. A. S. Test	I.-V. H. A. S. Test	Galactose Tolerance	Highest Urobilinogen
27	Gallstones (Operation)		0.38 0.36 0.46	Trace	Less than 1:10
72	Carcinoma of pancreas (Op.)		0.40	0.42	Neg.
102	Carcinoma of liver & pancr. (Operation)	0.53		0.60	

Case 27, at operation was found to have a well-marked hepatitis as well as gallstones.
Case 72 had been jaundiced about 6 months, and presumably the liver was damaged by the long-standing obstruction.
Case 102 had hematuria and possibly renal calculi, which might have diminished the excretion of hippuric acid as well as of galactose.

It is apparent that in this small series, neither the hippuric acid nor the galactose tolerance tests were highly useful in differentiating between obstructive and hepato-cellular types of jaundice. It should be noted, however, that none of the three cases of obstructive jaundice were entirely uncomplicated examples.

Other types of liver disease. Nine cases of various types of liver disease are listed in Table 4.

Varying results were obtained in this group of patients with diseased livers. The hippuric acid synthesis test was more often positive than either the galactose tolerance or the bromsulphthalein tests; some of the patients had positive hippuric acid tests at times, which became normal at other times; these fluctuations seemed to parallel the

TABLE 4.—*Liver Diseases.*

Case No.	Diagnosis	Oral H. A. S.	I.-V. H. A. S.	Galactose Tolerance	30-min. Brom. Retent.	Remarks.
93	Portal cirrhosis	1.69	0.33 0.91 0.65 0.92	0.48 1.69	30% 10% 10% 10%	Serial studies done over a 6-month period.
22	Portal cirrhosis (Mild, no ascites when tested)	2.60 2.75	1.07		0% 0%	
11	Portal cirrhosis	2.64	0.56 0.78 0.65 1.00	1.25	10% 5%	Clinical improvement parallels tests.
47	Cirrhosis, prob. portal, discov. at op., for ulcer		1.21			No liver symptoms.
5	Large cirrhotic liver and enlarged fibrotic pancreas (Op.)	1.86	0.37 0.71	3.89 0.83 1.24 2.8	0% 20% 35%	Tests over period 1½ years. Recurrences slight jaundice.
16	Ascites and splendomegaly, prob. Banti's. Child, aged 13, F.		0.21	3.09	20%	(Low serum protein. Slight jaundice.)
61	Ascites. Hepatomegaly probably syphilitic		1.09 1.34	0.51	Trace 0%	(No jaundice. Ascit. disappeared with treatment.)
111	Primary malignancy of liver. Autopsy		1.14 0.99		0%	
44	Hepato-splenomegaly, with chr. lymphatic leukem.	1.82	0.64			(Also had hypertension.)

clinical course—in the cases of cirrhosis, for instance, there was observed the commonly seen tendency for stationary periods to alternate with repeated episodes of low grade hepatitis, often accompanied by slight, subclinical icterus and increased ascites. It is notable that in the case of extensive liver involvement with primary neoplasm reported here, hepatic functions were normal, which has been the experience of most workers with most tests, because after all, liver function tests depend upon diffuse liver damage, and are not sensitive to circumscribed hepatic lesions, due to the tremendous reserve of the liver. This is in disagreement with the reports of Quick[4] and Yardumian and Rosenthal,[7] as previously mentioned.

PATIENTS WITH HEART DISEASE

Thirty of the patients studied had various types of heart disease. These were divided into those with and those without congestive failure. The results are shown in tables 5 and 6.

These results indicate that in cardiac disease it is common to find abnormally low results with the hippuric acid synthesis test; in most, but not all, instances this finding is associated with an impairment of the nitrogen excretion as indicated by the blood non-protein nitrogen retention; this appears to be true whether or not congestive failure is present.

PATIENTS WITH URINARY TRACT DISEASE

The importance of the renal excretory factor, as well as efficient bladder emptying, was pointed out in connection with the group of patients with heart disease.

TABLE 5.—*Patients With Congestive Heart Failure.*

Cases	18
Those having low hippuric acid excretion	13
(Oral test only	2)
(Oral and intravenous tests	11)
DETAILS:	
Liver enlargement	9
N. P. N. of 40 mg. or over	8
N. P. N. less than 40 mg.	3
(1 not determined)	
1 out of 4 tested had elevated Icterus index (14).	
2 out of 6 tested had 30-minute Brom. retention.	
2 out of 2 tested had normal galactose tolerance.	
All but one had normal urobilinogen urine levels.	
Those having normal hippuric acid excretion	5
(4 out of 5 had low level by oral test, but all 5 were normal by intravenous.)	
DETAILS:	
Liver enlargement	3
N. P. N. of 40 mg. or over	2
N. P. N. of less than 40 mg.	2
(1 not determined.)	

TABLE 6.—*Patients With Compensating Heart Disease.*

Cases	10
Those having low hippuric acid excretion	7
(4 had oral tests, not checked by i.-v.)	
DETAILS:	
Liver enlargement	1
(barely palpable.)	
N. P. N. of 40 mg. or over	3
(2 others had N. P. N. of 39.)	
(1 other had prostate dis.)	
(Therefore 6 out of 7 had impairment of urinary excretory mechanism.)	
Those having normal hippuric acid excretion	3
None of these had N. P. N. above 35 mg.	

Two additional cases not considered above, could not be definitely classified as to presence or absence of congestive failure; one had marked N. P. N. retention. Both had low hippuric acid excretion.

Other examples of urinary tract disease are outlined in table 7.

These results show that it is difficult to predict from the ordinary renal function tests whether or not hippuric acid excretion will be impaired.

TABLE 7.—*Patients With Urinary Tract Disease.*

Case No.	Diagnosis	Oral H. A. S. Test	I.-V. H. A. S. Test	Remarks
88	Spinal cord injury	1.25		Patient had difficulty emptying bladder.
90	Urolithiasis	1.53		X-ray diag, bilat. renal calculi. Repeated attacks renal colic.
37	Unilateral nephrectomy	1.63*	1.46	Impaired renal function by P. S. P. & concentration tests. N. P. N. 26.
15	Chronic nephritis with albuminuria		0.99	Empyema, possibly amyloid disease. N. P. N. 32-35. Urea clearance 47%.

*Patient could not void at end of test and may have thus caused low oral test, since i-v check was normal.

PATIENTS WITH HYPERTHYROIDISM

Three patients belong to this group. All were typical toxic cases of Grave's disease.

Case 30 had a normal intravenous hippuric acid test (1.12); the patient had been brought under control with iodine at the time of the test.

Case 17 had a normal intravenous and oral test (1.19, 4.52).

Case 60 had a low oral (1.16) test, but a normal intravenous test (1.01); this patient might have been anticipated to have a definitely abnormal result, inasmuch as she had a galactose tolerance above normal (3.2 Gm.), a 30-minute bromsulphthalein retention of 20 per cent, and had been observed to have a definite jaundice a few days previously.

Our results with these few cases, therefore, do not agree with those of Boyce and McFetridge,[1] who found consistently low hippuric acid excretions in toxic hyperthyroid patients.

Seven cases are not included in this discussion because at the end of their study, the diagnosis was not conclusive; most were instances of possible but not proven liver disease, such as chronic alcoholics. Five of the seven had normal results with the hippuric acid synthesis test.

DISCUSSION

We have been disappointed at the failure of the hippuric acid synthesis test to prove to be the ideal liver function test sought for. This study seems to show that it is subject to certain very definite sources of error, and chief of them are the factors of gastro-intestinal absorption, efficiency of renal excretion, and completeness of bladder emptying. It is recommended that a blood nitrogen determination be obtained whenever this test is used. The intravenous method, we believe, gives more reliable results than the oral.

We agree with certain other workers that the test by itself is not reliable in differentiating between obstructive and hepato-cellular jaundice. However, with increasing knowledge of the pathology of jaundice it is being realized that purely obstructive jaundice entirely unaccompanied by any degree of parenchymal liver damage probably seldom occurs; it is therefore unlikely that any test of liver function will ever be the complete answer to the problem of differential diagnosis. Nevertheless, this as well as other liver function tests, when correlated with other clinical and laboratory data, do often add useful information in jaundiced cases, and they should be used.

The low results of the hippuric acid synthesis test in the presence of heart disease seem to be due in most, but not all, instances to an impaired renal excretory function; other factors possibly concerned may be impaired liver function due to congestion, or diversion of the hippuric acid to tissue fluids.

The test did not give normal results in all of the patients supposedly free of liver, heart, and kidney disease. Results were more consistent when re-checked by the intravenous method of testing.

Quick[5] has recently published a criticism of Lipschutz' method of conducting the intravenous modification of the test, and his arguments seem plausible; he offers an intravenous method of his own, which consists of the injection of 1.77 Gm. of sodium benzoate in 20 cc. of solution, and the collection of urine for only one hour following. He gives the normal excretion as 0.7 to 0.95 Gm. of benzoic acid. We have not yet tried this method, but intend to do so, hoping that the results will be more satisfactory than they were in this study.

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AIRPLANE FLIGHTS AND DEAFNESS

Deafness due to obstructions of the eustachian tubes has been reported as having been relieved by an airplane flight, "*The Journal of the American Medical Association* for June 22 says in answer to a question as to how such relief might be obtained. "By increasing air pressure on descent," *The Journal* states, "air could be forced into closed eustachian tubes or the rarefied air on ascent could allow air under greater pressure in middle ears to escape through the eustachian tubes."

METRAZOL AND INSULIN TREATMENT IN PSYCHIATRY*

A. J. SCHWENKENBERG, M. D.
AND
ROBERT E. WINN, M. D.
DALLAS, TEXAS

Among the recent advances in psychiatric treatment is a form of therapy commonly referred to as shock therapy. It has been so designated, because, following extreme states of hypoglycemia produced by insulin injections or convulsions produced by intravenously administered metrazol (pentamethylentetrazol), there occurs, in many instances, when applied to psychotic states or even psychoneurotic reactions, rapid reversal of symptoms, resulting in improvements and even remission.

Although investigators favoring a more biological approach to psychiatry have, for some time, attempted to use some form of gas, chemical or narcotic agent in psychiatric treatment, the credit for introduction of insulin into psychiatry goes to Dr. Manfred Sakel, of Vienna, who, in 1933, reported his methods of hypoglycemic shock occurring during an artifically produced hyperinsulinism in cases of schizophrenia. In 1935, Ladislaus v. Meduna, of Hungary, also working with cases of schizophrenia, reported his methods and observations following the production of convulsions brought about by the administration of first camphor, and later cardiazol. Dr. Meduna had observed a biological antipathy between epilepsy and schizophrenia and was further encouraged in his beliefs by the work of Dr. Sakel.

Considerable interest has been centered on these therapies, both in Europe and the United States, until there is hardly a hospital or clinic that is not in a position to report some observations. At first, overenthusiasm was responsible for some inflated claims; however, it appears to us that now the value of the treatment has become fairly well recognized.

There are still many conservative investigators who feel that a purely psychological approach to so-called functional psychiatric states can never be replaced by any form of physiological therapy. They emphasize that most of the cases responding to shock therapy would eventually respond spontaneously; nevertheless, it can hardly be ignored, in the face of reliable statistics, that shock therapy does, at least, lessen the duration of many psychotic states. This is of considerable practical significance in private practice.

With the advent of shock therapy, research has been stimulated in fields allied to neurology, physiology, biochemistry and psychology. No definite explanation, however, has been forthcoming or advanced to explain the efficacy of the treatments, although it is generally felt that some biochemical change, closely allied with the vegetative nervous system, results from an anoxemia, occurring during the hypoglycemic and convulsive phases. It seems quite evident that, during the state of repeated shocks, there successively occurs disruptions in the higher levels of the nervous system. It has been suggested that there is a "letting down" of mental barriers, and there is some justification for the assumption that a release may follow in a purely psychological manner because patients apparently, during the shock, closely approach a level of death from which they instinctively want to escape.

Because of the extreme nature of the treatment, investigators immediately became concerned with the dangers to life and the possibility of brain damage. There was much to suggest biochemical and even pathological changes. Realizing such dangers, investigators proceeded with considerable cautiousness, even though it was felt that there was some justification for risk since the psychosis under investigation was of such a malignant nature. Statistics reveal few instances resulting in mortality, and there is little evidence to support the belief that serious brain damage occurs. Dr. E. A. Strecker showed that repeated convulsions, produced in experimental rabbits, caused capillary hemorrhages. Where death did occur, the fatality was attributable to other coincidental conditions existing in the patient which were aggravated by the shock. Dr. Willis D. Wright, working with Dr. A. E. Bennett, made cardiac studies of forty patients treated with metrazol and concluded that in none of the patients was the original electrocardiographic pattern changed.

Complications from metrazol shock therapy, however, have occurred frequently. Dislocations of the jaw, occurring during the convulsion, have been common but are easily replaced. Fractures of long bones have been reported. Most distressing, among the complications, have been compression fractures of the vertebrae, occurring especially in the mid-thoracic region. No one has reported injuries to the spinal cord, although persistent pain in the neighborhood of the fracture has been a very distressing symptom. Considerable effort has been made to improve the technique and especially the manner in which the patient is supported during the convulsion. Dr. A. E. Bennett suggested spinal anesthesia, which he found minimized the

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occurrence of vertebral fractures, and recently he and others have been investigating the effects of curarization, which produces a generalized neuromuscular paralysis, resulting in a flaccid generalized motor paresis.

Complications in insulin shock have not been as frequent, although some deaths have been reported, and symptoms have developed suggesting definite brain changes. It was our unfortunate experience to have one such complication, and it was the only fatality of our series.

Although investigation with shock therapy was first directed entirely toward schizophrenia, as investigators became more courageous, these therapies were gradually applied to other psychotic states, and it was soon apparent that many depressive stupors, in middle life, as well as affective reactive depressions and manic excited states responded in a very phenomenal manner to metrazol shock. Recently reports have been published, especially by Drs. Shapiro and Freeman, of Washington, D. C., showing improvement with both insulin and metrazol in certain psychoneurotic states.

Some attempt has been made to combine the insulin and metrazol in the same patient, and, at the present time, considerable investigation is being made in that direction.

Many investigators still confine shock treatment entirely to cases of schizophrenia (dementia praecox); others use both forms of treatment, preferring to try metrazol first because of its ease of administration and rapidity of effect. If no improvement occurs with metrazol, the treatment is changed to insulin.

We believe the majority of investigators feel we are now in a position to apply metrazol to certain cases and insulin to certain cases. It appears that certain types of schizophrenia, especially paranoid states and excited catatonic reactions, respond best to insulin, whereas stupor states, especially of a catatonic and depressive nature, respond best to metrazol. Little can be said for the psychoneurotic reactions, although there does seem to be a leaning toward metrazol. The time factor is of considerable significance in the schizophrenic reactions, as the best results are obtained in cases whose duration of illness has not been longer than a year, and even better results occur in the acute upsets treated within the first few months. Apparently the hebephrenic schizophrenic reactions respond to neither metrazol nor insulin. In the early catatonic upsets, metrazol seems to be the treatment of choice. Many striking recoveries have occurred following the administration of metrazol in the depressive reactions, especially the depressive stupors of middle life and the involutional reactions of later life, even in instances where the psychosis has existed for four or five years.

TECHNIQUE OF SHOCK THERAPY

Time will allow for only a very brief description of the technique of these shock therapies. It is the desire, with insulin shock treatment, to bring about, as soon as possible, a state of hypoglycemia to a degree where it will result in a "wet shock," which usually begins with profuse perspiration and progressing somnambulance. It has been thought advisable to avoid a state of "dry shock," because it has been felt that the epileptiform seizures, occurring during the late stages of "dry shock," were dangerous due to the difficulty of terminating such hypoglycemic states. Some investigators, however, have recently reported that patients responding in this manner improve much more rapidly and termination of the hypoglycemia can be carried out quite simply with special techniques. All patients receiving the insulin treatment are carefully selected after a thorough physical and laboratory examination. Certain contraindications with reference to cardiac abnormality, pulmonary disease and infectious conditions are always taken into consideration. The age of the patient is becoming less and less a consideration. Treatment is usually begun with fifteen units, and the dosage increased ten units daily. The amount of insulin varies considerably in individual cases; some patients develop a marked shock with twenty or thirty units, others require 250 units or more. The blood sugar, during the hypoglycemic state, may reach a low point, often below 20, but it has nothing to do with the nature of the shock phase. Although there has been some modification in technique used, the basic technique is still that originally outlined by Dr. Sakel.

Hypoglycemic shock may be given five or six days out of the week. From thirty to sixty shock days are desired, although patients obtain some improvement from the hypoglycemic state even when the extreme shock does not occur. Patients are allowed to remain in a hypoglycemic state from two to three hours and shock can be terminated quite easily by intranasal sucrose and glucose in ten or fifteen minutes and even more rapidly when glucose is administered intravenously. Intravenous glucose is also used in any emergency. Adrenalin is of value in certain difficult types of termination. Considerable skill is required to obtain the proper hypoglycemic response, and patients should be under the constant care of trained technicians with a physician always in attendance.

Metrazol shock is obtained by the administration of metrazol (pentamethylentetrazol) intravenously in 10 per cent solution. When spinal anesthesia is used, it should be administered thirty or forty minutes before the metrazol is given. From 15 to 20 mg. of pontocaine hydrochloride is used for the spinal anesthesia. From 3 to 5 cc. of metrazol is administered intravenously and given very rapidly with a 20 gauge needle. A convulsion usually follows within twenty to sixty seconds, although occasionally the seizure will be a little slower in developing. Sedatives administered the night before might interfere with the convulsion. If no seizure occurs, the dose may be repeated in a few minutes and increased 0.5 to 1 cc. The convulsive seizure usually lasts from one to three minutes and is of a grand mal nature. Spasms occur simultaneously in all muscles in a bilateral systematic manner. All four extremities are supported, as well as the hips, although with spinal anesthesia no support is required for the lower extremities.

Treatments are given two or three times a week, although some investigators have given them every day. The patient remains in a state of amnesia for ten or fifteen minutes, or even longer, after the convulsion. Some patients become rather excited and others somnambulant. Many patients, although they have no knowledge of the nature of the treatment, develop a fear of the method, as they have a slight recollection of the very unpleasant sensation which occurs for a period of fifteen or twenty seconds while the metrazol is being administered. This sensation has been described in many different fashions, but in the majority simulates approaching death. In instances where no convulsion occurs following the administration of the metrazol, this unpleasant sensation is much greater, and the fear is more disturbing. In cases very resistive to convulsions, three or four attempts might be necessary before a convulsion follows. In some instances, it has been necessary to administer as high as 12 cc.; however, this is the exception rather than the rule. The average patient of 150 pounds will respond very well to 6 or 7 cc. of metrazol. Patients who object vigorously to the treatment may be given hyoscine hydrobromide one hour before. It has recently been suggested that such patients may be given insulin, and just before they reach a state of shock or coma the metrazol may be administered, then immediately afterwards the hypoglycemic state should be terminated.

Patients receiving metrazol are examined just as thoroughly as those receiving the insulin, although in most clinics electrocardiographic studies are also made. As with insulin, the age of the patient is becoming less and less a consideration.

Dr. Meduna's original suggestion was that twenty-five convulsions should constitute a course; however, most investigators find that if results are to be had they will be obtained with from ten to fifteen seizures.

Our experience with shock therapy has been in the Beverly Hills Sanitarium, of Dallas, Texas, a small, private, psychopathic hospital. We began to use insulin on April 20, 1937, and proceeded rather cautiously, because one of our early cases resulted in a fatality. This fatality occurred in the case of a young, catatonic female, with an acute onset. After receiving sixty units of insulin, she went into an extreme coma on the third day of the insulin treatment. It had been suggested that the danger from a marked daily increase in insulin was not to be considered; consequently, she was given twenty units on the first day without a reaction, forty units on the second day with only a mild hypoglycemic reaction, and sixty units on the third day. She remained in an extreme coma for about one hour, when an attempt was made to terminate the coma, but she did not respond, even when glucose was administered intravenously. She developed a high fever, became very nauseated and vomited what appeared to be old blood. Her vegetative nervous system became markedly upset; the pupils became dilated and fixed, and adrenalin had no effect. It was felt, at first, that she had developed a state of alkalosis, but she failed to respond to any treatment directed against it. Her blood sugar rapidly returned to normal. There was a gradual improvement in her physical condition, although persistent signs indicating a disturbance in the frontal lobes and basal ganglia suggested that she had developed an encephalopathy. She lived for one year and died of an intercurrent infection.

During the first twelve months, we treated only eighteen cases with insulin, and we were not very encouraged by our results. Many of these cases, however, were of long duration.

On April 2, 1938, we began the use of metrazol and were impressed by some striking results. Two patients who had been receiving insulin at that time, but were showing very little signs of improvement, were given metrazol and both made rapid remissions.

Since we began using insulin in 1937, we have treated ninety-eight cases with either insulin or metrazol, and the results of our observations follow.

It is to be emphasized that psychiatric treatment in private practice is carried on under different circumstances than in large public or endowed institutions. The econom-

ic factor is always a consideration, and because patients are not committed to the private hospital, there is always considerable interference one way or another. Many of our patients were removed from the sanitarium too soon because of poor financial resources. On the other hand, the private psychopathic hospital does have an opportunity to treat many cases in a very acute stage. It is interesting to note, in spite of the fact that we feel the treatment was insufficient in several cases, that our results, as a whole, compare quite favorably with other reports where more time was available and there was less interference.

Among these ninety-eight cases there appear several type of psychoses. We think they represent a fair cross section of the patients seen and treated in the average private psychopathic sanitarium and offer an opportunity to study the value of shock therapy in private practice.

For simplification in this report we have divided these cases into seven groups. The classification, type of treatment, and results are herewith described in the accompanying chart.

SUMMARY

In this report of ninety-eight cases, we used both insulin and metrazol shock therapy; in most cases we began with metrazol and if there was no improvement changed to insulin. We have administreded 662 doses of intravenous metrazol following which there occurred 634 grand mal attacks. No deaths occurred in the cases treated with metrazol nor any serious complications. Dislocation of the jaw, which some investigators report is quite frequent, did not occur in a single instance. We believe that our method of using a photographic sponge for a mouth gag prevents these dislocations. The sponge is inserted in the mouth before the administration of the metrazol, and the jaws are held tightly together during the convulsion. In one instance, there was a fracture of the humerus, and an x-ray revealed that it occurred at the site of an old fracture. In three instances, x-rays revealed slight compression vertebral fractures, two in the midthoracic region and one in the lumbar region. None of these cases showed evidence of spinal cord disturbance. The patient with the fracture in the lumbar region was given a brace, which he wore for six weeks. After that time, he received seven more injections of metrazol, preceded by spinal anesthesia, with no complications and a complete recovery. He was a male, 61 years old, with an involutional melancholia of five years standing, and he had been in one sanitarium as long as one and one-half years.

An electrocardiogram was made in each case. In no case was metrazol or insulin administered where there was any indication of a cardiac disturbance.

One patient, a man, age 73, received fifteen metrazol shocks, each preceded by spinal anesthesia, without any ill results. In one case thirty-three metrazol convulsize shocks were administered without any ill results.

We have been using spinal anesthesia for about a year, and it was used in 75 per cent of the cases, amounting to 168 spinal anesthesias, without any disturbing effects. In one case twenty-six spinal anesthesias were given preceding twenty-six convulsive shocks.

We, too, have given considerable thought to the possibility of brain damage and attempts have been made to follow up as many cases as possible. As far as we are able to determine, there are no objective signs indicating any brain damage. In two instances, headaches and vomiting occurred following the metrazol therapy and in each instance the spinal fluid pressure was increased. Metrazol was discontinued and spinal fluid pressure studies, as well as examination of the eye grounds, revealed no further indication of intracranial pressure. In some cases, relatives have reported certain mild changes in personality, especially changes in mood, and some patients have insisted that they are forgetful for one or two months after the treatments are discontinued.

In studying the schizophrenic reactions, in no instance have I been convinced that there was any change in the schizophrenic personality pattern.

As a group, the depressive reactions responded best to metrazol shock. Apparently, the duration of the illness in the depressive group was not as important as in the schizophrenic group. The involutional melancholic reactions, many of long standing, responded with phenomenal results following only a small number of convulsions. Although the early catatonic reactions responded quite strikingly, it appears that there is a tendency toward early regression. In one case, however, an acute catatonic reaction of three weeks standing became quite accessible after six metrazol convulsive shocks. It was then possible to discuss her life situation, and it was found that she had many conflicts. She was discharged from the sanitarium, had a slight regression, and seven more metrazol shocks were administered. She returned to her position, which would otherwise have been lost, and is perfectly well at this time. She has told us that the information she received, which had to do with her recent marriage and methods of sexual adjustment, was

TABLE 1.—*Results Obtained by Metrazol and Insulin Shock Therapy in 98 Cases From April 20, 1937, to April 1, 1940*

General Classification	Type & No. of Cases	Average Age	Duration of Symptoms	Aver. Stay in San.	Type of Shock	No. Metrazol Convulsions	No. of Insulin Comas	RESULTS			
								No. Imp.	Sl. Imp.	Improved	Remissions
GROUP I Chronic Schizophrenia (Dementia Praecox)	Paranoid 4	35½ yrs.	1 to 20 yrs.	Aver. 1 yr.	7 Metrazol & insulin. 2 cases metrazol only	15 to 20	Good average course of comas		4		
	Hebephrenic 5	Entire						3	2		
	Catatonic 1	Group									1
GROUP II Acute Schizophrenic Reactions	Paranoid 16	37½ yrs.	Aver. 1 yr.	11½ wks.	Chiefly metrazol. Some cases insulin later with good results	3 to 37	Good average in most cases			14	2
	Hebephrenic 3	18 yrs.	Aver. 3 yrs.					3			
	Catatonic 14	23 yrs.	Aver. 1½ mos.	9½ wks.				3	3	2	6
GROUP III Depressions	Affective Reactive 11	37 yrs.	1 mo. to 1 yr.	9½ wks.	Metrazol only although several cases had insufficient amount	2 to 28 Only aver. 9 for group	None		5	1	5
	Involution 9	54 yrs.	3 mo. to 5 yrs.	7 wks.					1		8
	Arteriosclerosis 1	73 yrs.	2 yrs.	2 mos.						1	
	Manic Dep. (Cyclic) 3	38 yrs.	Aver. 4 yrs.	7½ wks.				3—All eventually had remissions without further treatments.			
GROUP IV Manic Depressive	Manic Phase Only 4	32½ yrs.	1 mo. All had previous attacks	3½ mos.	Metrazol only	Aver. 6 for entire group	None	1	1		2
GROUP V Psychoneuroses	Chronic Anxiety 5	37 yrs.	2 to 7 yrs.	5 wks.	Metrazol only	Only 30 for entire group	None	5 Became worse			
	Obsessional, Compulsive 4	Entire Group							3	1	
GROUP VI Received Insulin Only	Paranoid 5	20 to 55 yrs.	3 weeks to 6 years	3½ mos.	Insulin only	None	Aver. 16 hypoglycemic days entire group. Greatest number 33 comas		1	2	2
	Catatonic 2							1 Died			1
	Hebephrenic 2							2			
	Obsessional, Compulsive 1										1
GROUP VII Addictions	Morphine 2	38 yrs.		3 wks.	Insulin only	None	4 weeks treatment. No comas			2	
	Alcohol 6			4 wks.						6	
Total	98							21	20	29	28

very helpful, and she attributes much of her recovery to this information.

As a group, the paranoid reactions respond best to insulin, and one severe paranoid, of four years standing, manifested a striking recovery after a prolonged shock. Apparently, in all paranoid reactions, the time factor has to be considered as most cases with duration over a year showed very little response. We believe many of the paranoid reactions of middle life, especially females and those cases manifesting ideas of reference and delusions of infidelity, might benefit considerably by a course of insulin therapy.

In many of the cases receiving both metrazol and insulin, it was possible, because they became more accessible, to employ more psychotherapy. With the possible exception of the fear that some patients exhibited because of the metrazol treatment, the average patient receiving shock therapy made a much better adjustment to the sanitarium and was much more amenable to psychotherapy.

CONCLUSIONS

1. A report of ninety-eight cases of insulin and metrazol shock in a private psychopathic hospital is herewith presented.

2. We believe that shock therapy is of value in a private psychopathic hospital, as there is a definite shortening of the attacks, and many cases can be treated early.

3. Generally, shock therapy makes the patient more amenable to psychotherapy, except in instances where considerable fear is developed.

4. We believe, in some instances, that early administration of shock therapy will prevent a chronic, incurable psychosis.

5. Dangers and complications are not great provided the proper prophylaxis is taken.

6. Shock therapy should be carried on in a psychopathic hospital by trained technicians under the proper medical supervision.

7. Shock therapy should not be given preference over psychotherapy based upon psychobiological principles.

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ABSTRACT OF DISCUSSION

Dr. Charles H. Brown, Wichita Falls: Dr. Schwenkenberg has presented a subject that for the past seven years has revolutionized to a great extent the thought concerning the biggest problem of psychiatry, namely, the etiology, course, prognosis and treatment of schizophrenia. With the advent of shock therapy in 1933 there came for the first time into the hands of the psychiatrist an active principle of treatment which has helped to eliminate in a great many instances the hopeless prognosis previously expected. With the advantages found in schizophrenia, it was only a short step to the utilization of this same form of treatment in other mental disorders and it was found to be of the best value in depressive types of reactions.

It is my desire to re-emphasize three major points brought out by the speaker. Firstly, of what practical value is this treatment for the general practitioner? To my mind the chief advantage here lies in the fact that for the first time the family doctor can say to his distressed family with the mental problem, "Go see Dr. so-and-so, he is qualified to administer a treatment that will benefit this case." Now he can feel a certain degree of confidence in his referrals to psychiatrists and does not have to think only in terms of permanent hospitalizations in charitable institutions. It gives him the same sense of security that a consultation with a surgeon for an acute emergency would bring.

Along that line I wish to emphasize very strongly the second point, namely, that it is of vital necessity that these cases be referred early. It is a proven fact that cases of six months and under have from 70 to 85 per cent chance of recovery, whereas those with symptoms of over two or three years' duration have a limited recovery rate, not over 50 per cent at the highest. In a series of 600 cases treated during the past two years, 250 of which were personally observed, the improvement rate was 88 per cent with symptoms less than six months and only 42 per cent with symptoms over two years, while the total recovery rate was 75 per cent in the six month group and only 38 per cent in the two-year group.

The third and final point is that the forms of shock therapy are not office procedures. There are certain and well-recognized complicating factors with both metrazol and insulin, and it is my belie that they should be administered only in a hospital fully equipped with a staff adequately trained i their particular administration. Even among the most experienced workers certain complications have occurred, the most frequent of which has been the compression fractures of the thoracic vertebrae. There have been a number of various devices used recently to overcome this objectionable feature, which have proven satisfactory except for the added equipment necessary. It is hoped that we may be able to find a more practical and economic method of prevention in the future. The author mentions that he has never had occasion to observe any spinal injury secondary to these fractures. I have had recently the unfortunate experience of seeing a complete bilateral paralysis of the lower extremities with typical findings of pyramidal tract involvement and a definite sensory level at the seventh thoracic region, which came on more or less suddenly some three weeks after the last metrazol injection. Roent-

genologic studies revealed the typical compression of the fifth, sixth and seventh thoracic vertebrae. It is gratifying to relate that the patient has regained almost complete use of the extremities at this time.

It has been a pleasure to discuss this comprehensive and graphic account of shock therapy, and we all hope that perhaps after all these centuries of groping in the dark for mental relief we may perhaps be started on the right track.

Dr. G. W. Day, Fort Worth: Until four years ago, schizophrenia was the most dreaded of all mental diseases, victims of this malady occupying about one-fourth of all the hospital beds in the United States. Since the acquisition of these newer methods of treatment, however, this condition is reversing itself and schizophrenia is no longer the cancer of psychiatry that it used to be.

I think Dr. Schwenkenberg has given us a very thorough, impartial, and conservative analysis of his rather large group of cases; too conservative, I think, because I am sure that his number of remissions would be larger if he had recent reports on some of the cases he has reported as only improved.

I wish to discuss four points in this paper.

First, as pointed out, Meduna observed a biological antipathy between essential epilepsy and schizophrenia. My observation leads me to believe that the two conditions are not antagonistic, but twins, that is, two forms of the same disease, very much in the same sense that mania and depression are two forms of manic-depressive psychosis. They frequently occur in the same individual, and when a schizophrenic-epileptic who is psychotic begins having frequent convulsions, his psychosis subsides. Likewise, when something stops him from having convulsions, he very frequently become psychotic. I think that herein lies the answer to the question why induced convulsions resolve a schizophrenic psychosis.

Second, it is not intended that these methods should replace psychotherapy, but rather to bring about a condition of the patient wherein psychotherapy can be applied. Probably every psychotic person has personality and environmental difficulties that have to be treated.

Third, there is no dynamic method of treatment that has no mortality and the mortality from these methods is less than that of any heroic method I know.

Fourth, private psychopathic hospitals are doing much and will do much more to relieve the State of the burden of caring for these mentally ill for the rest of their lives because private institutions get them much earlier than the State hospitals possibly could, and are therefore able to treat them at a time when treatment can be successfully applied.

What about the permanency of these remissions? I am often asked that question, and my answer is always that any method of treating a chronic disease must be in use at least fifteen or twenty years before definite ideas of its permanency can be intelligently formed. I contend that if a three-year remission can be accomplished in two months, which it can, and the same process repeated every three years, that patient will be restored to his family and work status seventeen-eighteenths, or about 94 per cent of the remainder of his life, whereas under the old methods of handling, he would probably spend 75 per cent of his future life in some State hospital.

The child who has a heart murmur should be allowed to carry on a reasonably normal, happy life, without too many restrictions, R. Earle Glendy, M. D., Boston, contends in *Hygeia, The Health Magazine.*

THE DIAGNOSTIC AND PROGNOSTIC VALUE OF THE SEDIMENTATION RATE*

LEON C. KOPECKY, M. D.,
SAN ANTONIO, TEXAS

Within more recent years, the determination of the sedimentation speed of erythrocytes has taken its place among the higher ranking laboratory aids with a very definite prognostic as well as diagnostic value.

As early as the year 200 A. D., Galen noticed that if blood was allowed to stand in a tube, a white line would form at the top. In 1791, John Hunter noticed that the red blood cells from those patients with inflammatory conditions settled more rapidly than those from patients who were considered normal.[6] The test was practically forgotten after this time until the work of Fahreus[5] in 1918, when he discovered that there was a marked increase in the sedimentation rate of red cells in the citrated blood of pregnant women. Two years later, at the beginning of 1920, Linzemier[9] noticed this increased rapidity of sedimentation in patients with pyosalpinx. Following this, the test rapidly became more popular in the field of gynecology and obstetrics, and in 1928 its importance was recognized in urology. Since 1928, an increasing amount of work has been done and the test is now applied in practically every field of medicine.

There are numerous theories advanced as to the mechanism that brings about the sedimentation of the erythrocytes. What happens is not exactly understood as yet; numerous hypotheses have been advanced to give a satisfactory explanation. One of the most popular theories is that advanced by Fahreus,[5] who believed that the increased sedimentation rate is caused by a disturbance in the electrical charge of the red blood corpuscles which brings about their agglutination and increases the sedimentation time. Reyner[10] thinks that there is a disturbance in the surface tension of the blood plasma that accounts for the increase. Hunt[8] is of the opinion that it is due to an increase in the fibrogen content of the blood. Another[7] explanation advanced for this phenomenon is that the sedimentation rate depends on the presence of a foreign protein in the blood: in infectious conditions, the protein of bacteria; in malignancy or coronary occlusion, the protein from necrotic tissue; in pregnancy, the protein from fetal catabolism.

There are several different methods of determination of the sedimentation rate in

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use at the present time. This adds further to the confusion, as each is interpreted somewhat differently. The principle in all of them consists in measuring the distance in millimeters which the red blood cells fall in one or more hours; or, the number of minutes necessary for the red blood cells to fall a given distance. The method used in this study is the one compiled by Brooks.[1] The Brooks' sedimentation pipette (Fig. 1*a*,) consists of a glass tube 100 mm. long with a bore 1 mm. in diameter. The technique is very simple and only takes a few minutes to perform. In carrying out this method, the needle is attached to the pipette and inserted into a sterile rubber-capped vial containing 20 per cent potassium oxalate. The anticoagulant is drawn up into the pipette a little beyond the 100 mm. mark. At this point the stopcock is closed and the apparatus taken to the bedside of the patient. Under aseptic technique, the arm is sterilized, the contents of the pipette blown out, and the needle inserted into the vein. As the column of blood rapidly reaches the 100 mm. mark, the stopcock is quickly closed. The needle is then removed from the pipette and the excess amount of blood wiped off the ground glass tip. The apparatus is then immediately set up in an absolutely vertical position and readings are taken every minute or less, depending on the rate of sedimentation. (Fig. 1*b*). The results are plotted on a chart for a period of at least one, usually two hours. It is of the utmost importance to have the pipette in as nearly a vertical position as possible, as any variation from the vertical causes a distinct increase in the rapidity of sedimentation of the cells. It is difficult to say what reading is normal, but from our observations, we feel that 20 mm. in two hours is the upper limit of normal.

Sedimentation rate determination has recently been recognized useful not only as a diagnostic adjunct but also in regard to prognosis and even as a guide in treatment. In the field of gynecology its use has been quite extensive. In the urological field an increased rate is found in pyelitis, pyelonephritis and perinephritic abscess. In urethral colic, without an accompanying infection, a normal rate is obtained. In differentiating conditions that cause pain in the right lower quadrant, the test is of distinct value. In acute appendicitis, whether catarrhal or gangrenous, without rupture, the sedimentation rate is normal. On the other hand, in pyelitis, salpingitis, or ruptured appendix cases there is an increased sedimentation rate. Many will not operate on a pelvic inflammatory condition until the sedimentation rate has returned to normal.

In pregnancy, the rate does not become increased until about the third month. Its value here in differentiating a gravid uterus from a large fibroid is well established. The benign tumors of the uterus and ovaries do not give an increased sedimentation rate.

It has been found that in malignancies, the sedimentation rate fairly well parallels the severity of the new growth. We have a number of cases in which the rate of sedimentation led us to speculate on the grade of carcinoma presents; our suspicion was later substantiated by the microscopic report. In this

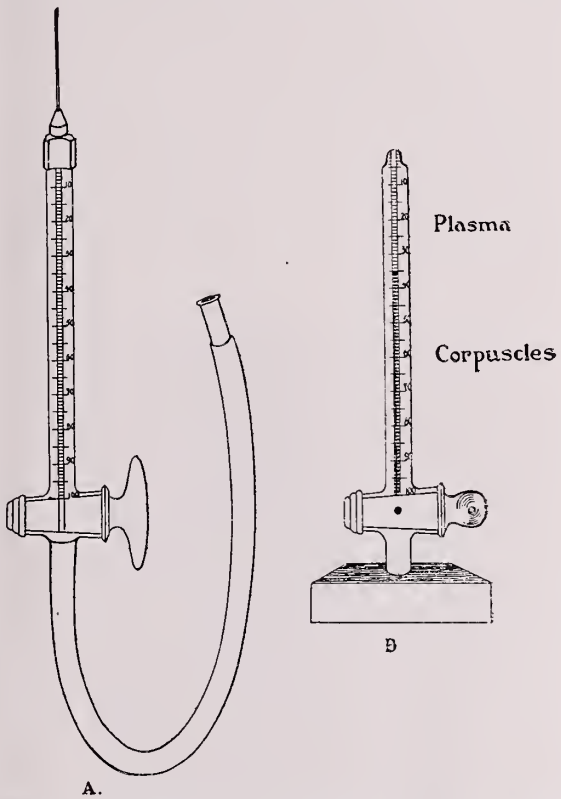

Fig. 1. Brook sedimentation pipette. a. Ready to be filled. b. During sedimentation. (After Brooks, Clyde: American Journal of Medical Technology 3:1 (Jan.) 1937. Reprinted by permission.)

field, it is quite helpful in determining whether or not the entire growth was removed. Following surgical removal, the sedimentation time usually returns to normal within six or eight weeks. If it does not, one can be fairly certain, no infection being present, that the entire growth was not removed or else that a metastasis is present. If, after six or seven months, the sedimentation rate is still normal, one can feel that there probably will not be a recurrence. If, however, the sedimentation rate becomes increased after six or eight weeks and there is no other condition to account for the in-

crease, a recurrence of the malignancy must be strongly suspected.

In pneumonia, both in diagnosis and prognosis, the test is of great value. Acute bronchitis, asthma or the common cold give normal sedimentation rates. In a number of our cases of pneumonia, sedimentation rates showed a markedly increased settling of the cells even before any marked physical signs could be detected. The course of pneumonia can be followed from day to day. In this manner, one can usually predict an extension of the pneumonic process a good many hours before any physical signs are made out. The sedimentation rate usually returns to normal in about four or six weeks after the temperature has subsided.

In tuberculosis, it has been found to be very valuable in determining when to let the patient out of bed. After the sedimentation test gradually returns to normal, one can be fairly sure that the process has been arrested. We had one very interesting case that was diagnosed as chronic pelvic infection. The sedimentation rate was 73 mm. in two hours. This was more rapid than is usually found in such cases, especially in cases of chronic inflammation, so malignancy was suspected. Microscopic examination revealed a tuberculous salpingitis and endometritis. About eight weeks after operation, the sedimentation rate was exactly 7 mm. in two hours. We interpreted this to mean that the entire tuberculous process had been removed.

One of the greatest uses of the sedimentation test is in rheumatic fever, rheumatoid and gonorrheal arthritis. In rheumatic fever the sedimentation time remains increased until the process has become quiescent. In this manner, one can follow the gradual improvement and thus allow the patient more physical freedom. This is especially valuable in those patients who have active rheumatic cardiac involvement. Subacute bacterial endocarditis gives one of the most rapid sedimentation rates we have encountered, and when this condition is suspected, rate determination is of help.

During the last three or four years, a vast amount of work has been done on sedimentation rates following coronary thrombosis. In those cases in which we have made determinations, the rate became increased within the first twenty-four hours following the occlusion. In one case, the sedimentation rate was 73 mm. in two hours. The test is valuable in differentiating coronary thrombosis from angina pectoris; in the latter condition it remains normal. The rate returns to normal when healing of the infarct is complete.

In diseases of the gastro-intestinal tract the sedimentation rate is of value in differentiating organic and functional conditions. When patients within the cancer age complain of gastro-intestinal symptoms, yet have a normal rate, the probability of malignancy is small. In simple duodenal ulcer, the rate is usually normal, or slightly increased, but varies in proportion to the amount of ulcer activity. The test is said to be of value in following the progress of the healing of gastric or duodenal ulcers.

CONCLUSIONS

1. A simple method of estimating the sedimentation rate is discussed.

2. The test is a sensitive indicator, ranking with the white blood count and temperature chart in usefulness. It is an invaluable guide in determining the time for operation in pelvic inflammatory conditions. In malignancies the sedimentation rate varied with the degree of tissue involvement. It is not a specific diagnostic test, but the presence or absence of an increased sedimentation time has great value in differential diagnosis. It is of distinct value in following the progress of a disease.

3. The sedimentation test has proven its reliability and can be used to best advantage when it is properly correlated with the history, the physical and laboratory findings.

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ABSTRACT OF DISCUSSION

Dr. Moise D. Levy, Houston: The essayist has given us a complete resume of the value of the sedimentation rate as an aid in diagnosis and prognosis, in a clear and concise manner. It appears unfortunate that a test such as this, with potentialities for so much important information, should not be standardized. It is not possible to compare results of different workers because of the variety of methods used at the present time—most of which have been described in Dr. Kopecky's paper. If studies were begun with the purpose of standardizing the procedure and results of this test, a definite service would be rendered to medicine.

Thorough understanding of the method used and its interpretations should be known by those requesting the sedimentation test, and every report should of course give the name of the method used. It is not probable that everyone requesting the aid of this test will be familiar with the various methods used. Therefore a conference should be held with the laboratory worker in order to understand his report intelligently. The many factors which influence this test have been enumerated, and unless properly understood may invalidate the results. As with most laboratory procedures, this is another test which should be left to the trained worker, rather than be attempted by the casual investigator.

Dr. Kopecky is to be commended for his conservative attitude toward the value of this procedure in the many diseases in which it has been used. The hope is expressed that, as a result of the extensive use being made of the sedimentation test, the chaff will be separated from the grain, and we will soon have given to us a standard procedure, which we can use in prognosis and diagnosis with the same confidence that we now use the Wassermann test.

Dr. H. B. Allen, Brownwood: I have very much enjoyed Dr. Kopecky's splendid presentation of a most important and interesting subject. A decrease in the sedimentation rate from one to three months after symptoms subside is an indication of a cure in many infectious diseases.

Some of our best authorities in the study of sedimentation rate in scarlet fever state that they can anticipate the onset of complications such as albuminuria, nephritis, otitis media, and cervical adenitis by the increase of the sedimentation rate even before the symptoms are manifested.

During the first four or five days in uncomplicated influenza the rate is normal, with a slight elevation about the eighth day. No relation exists between the heighth of the sedimentation rate and the elevation of temperature.

The mortality in gynecologic laparotomies associated with high sedimentation tests is twice as high as in cases in which the sedimentation test is normal. Many gynecologists will not perform laparotomies or curettements on patients until the sedimentation test is normal. There is no relation of the elevation of sedimentation rate and the spinal fluid pressure. This test can also be utilized on some patients who are feigning symptoms. An abnormally low sedimentation rate excludes organic trouble. It may be very difficult to find the cause of an accelerated sedimentation test but the physician must not give up before it is found. It should be an incentive to continue investigations. My opinion is that the sedimentation test is a valuable diagnostic and prognostic aid and should be utilized by every physician.

SYPHILIS TRANSMITTED BY KISSING

Syphilis was transmitted to five of eleven members of a family by means of kissing, Gradie R. Rowntree, M. D., and James Robert Hendon, M. D., Louisville, Ky., report in *The Journal of the American Medical Association* for July 13. The original familial infection was from an outside source—through kissing.

The authors state that physicians should be more suspicious of all lesions which might possibly be syphilitic. Two of their patients, they say, had previously been to physicians who made a diagnosis of lip impetigo in one and trench mouth in the other. Only good fortune saved the entire family from acquiring the disease, as they are all affectionate people.

SPACE-OCCUPYING LESIONS OF THE SPINAL CANAL*

JAMES GREENWOOD JR., M. D.
HOUSTON, TEXAS

Ten years ago the term "space-occupying lesions of the spinal canal" would have meant chiefly spinal cord tumors. Today it means much more for it includes the protruded cartilaginous disk, hypertrophied ligamentum flavum, granulomas, and other conditions.

The literature is full of recent articles on the relief of sciatic and low back pain following removal of a protruded disk; few discoveries in recent years have equalled in importance this contribution. It would seem rather odd that such an obvious disease should elude understanding so long. The lack of mortality in these conditions, coupled with the fact that the spinal canal, due to its structure, is the least frequent of all regions of the body to be explored post mortem, is probably the reason for this delay. That the field is still fertile is evidenced by such studies as those

FIG. 1. Lipiodol block caused by meningioma at the level of the eighth and ninth thoracic vertebrae.

of Temple Fay[1] reviving Spillers' syndrome, or epidural ascending spinal paralysis.

That there is need for further study of lesions of the spinal canal is evidenced by the fact that accurate follow-up studies in disk cases do not reveal a 100 per cent cure and by the fact that in something over 25 per cent

*Read before the Section on Surgery, State Medical Association of Texas, Dallas, May 14, 1940.

of negative explorations for disks, absolutely complete postoperative relief results from decompression alone.

SPINAL CORD TUMORS

The majority of spinal cord tumors are benign. This factor should make us strive to diagnose them early. Even those who are neurologically inclined are a little too ready to call early spinal cord lesions syphilis, myelitis or visceral disease. We think of the old classical picture of spinal cord tumor: a complete anesthetic level, complete motor paralysis below this level, incontinence, spinal fluid block, and perhaps a bed sore or two. This is, of course, a picture of a complete cord lesion due to tumor, a late and usually

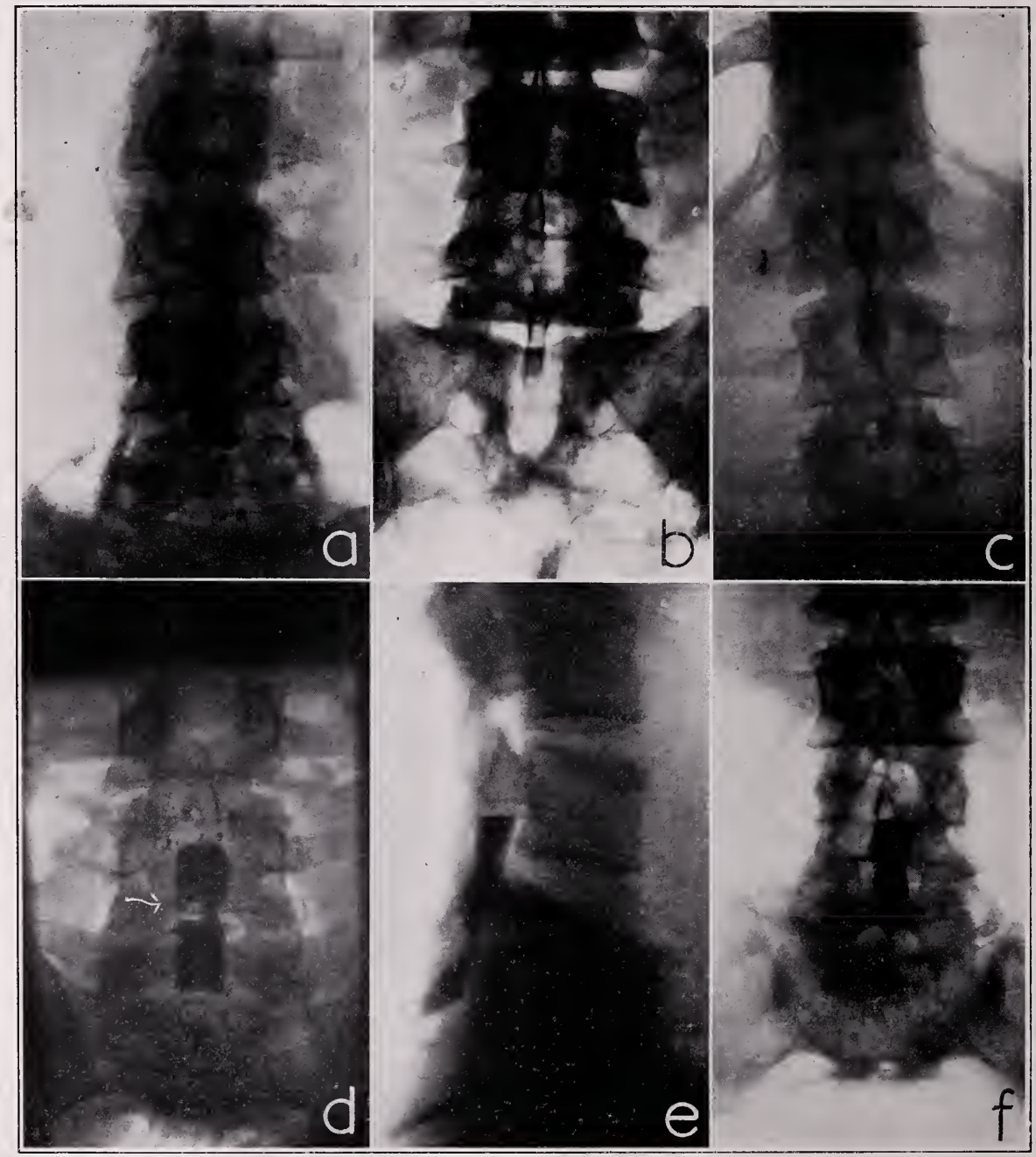

FIG. 2. Typical roentgenograms of disk protrusion: *a*. Protruded nucleus pulposus—characteristic lipiodol deformity between the third and fourth lumbar vertebrae. *b*. Air myelography in a case of protruded nucleus pulposus between the fifth lumbar and first sacral vertebrae. *c*. Hour glass deformity produced by hypertrophied ligamentum flavum. A small disk is also present. *d*. Protruded nucleus pulposus between the fourth and fifth lumbar vertebrae (same case as shown in *c*). *e*. Hypertrophied ligamentum flavum compensatory for weakening of bone due to osteoma of the fifth lumbar and first sacral vertebrae. *f*. Anteroposterior view of same case shown in *e*.

not hopeful situation. To insure good surgical results the diagnosis should and can be made when there is still only motor weakness (not paralysis), a few sensory changes (not anesthesia), a residual urine revealed by chatheterization after voiding, (not incontinence). While we can usually differentiate between extra and intra-medullary cord tumors, much time is wasted in so doing. It would seem to be more worth while to divide the symptoms into *late* and *early* stages of cord tumor.

TABLE 1.—*Diagnostic Signs in Spinal Cord Tumor.*

Early	Late
1. Root pains—aggravated by coughing, sneezing, straining	1. Root pains—same characteristics
2. Motor weakness	2. Paralysis
3. Sensory disturbance	3. Anesthetic level
4. Residual urine	4. Urinary incontinence
5. Increased deep reflexes	5. Increased or absent reflexes
6. Increased spinal fluid protein	6. Froins syndrome
7. Spinal fluid pressure normal	7. Spinal fluid pressure low
8. Partial block by Queckenstedt	8. Complete block
9. Level of tumor revealed by air or lipiodol	9. Level of tumor revealed by air or lipiodol
10. Bone changes by x-ray	10. Bone changes by x-ray

The following two cases illustrate the usual problem encountered and show how the symptoms presented are considered in establishing the diagnosis.

CASE 1.—Mr. H. B., age 28, was admitted to Hermann Hospital in January, 1939. Eight months previous to operation he complained of severe pain in the left loin accentuated by coughing. Retrograde pyelogram showed an enlarged right kidney. Later a gastro-intestinal series revealed a "chronic duodenal ulcer." Medical treatment for four months gave no relief. It was then noticed that he had a somewhat "wobbly" gait. A neurological examination revealed loss of pain and temperature sense below the umbilicus. Touch was diminished in the same area. Other sensations were well preserved. There was a bilateral Babinski and marked weakness of the left leg; coughing reproduced pain. A Queckenstedt test showed partial block and lipiodol showed this to be at the tenth thoracic body. (Fig. 1*a*.) A large meningioma was removed at the level of the thoracic eighth and ninth vertebrae. He has been free of pain for fourteen months and is able to play a good game of baseball at the present time.

CASE 2.—Mr. E. H., age 53, was admitted to Southern Pacific Hospital June 23, 1939. He complained of difficulty in walking, chiefly weakness and a flapping of his feet (steppage gait) which began approximately six years previously. He had all of his teeth removed in an effort to get rid of a focus of infection. Recently he had experienced difficulty controlling urine.

Neurological examination showed weakness of all muscle groups below the knee and posterior thigh. All deep reflexes were absent in the lower extremities. There was a saddle anesthesia. A Queckenstedt test showed partial block. Residual urine of forty-four ounces was obtained by catheterization. Four days prior to operation he was unable to retain an enema. A laminectomy on July 24, 1939, revealed a large dermoid cyst of the conus containing a characteristic cheesy desquamated material, hair, a little bone and cartilage. Part of the capsule was left attached to the tip of the thinned-out conus after repeated attempts showed it could not be removed without doing damage to this important area. Recovery was rapid. One month later he was able to walk extremely well. Bowel and bladder function recovered in about two months.

DISK PROTRUSION AND HYPERTROPHIED LIGAMENTUM FLAVUM

Disk protrusion or herniated nucleus pulposus occupies the center of the stage at the present time as far as spinal canal surgery is concerned. No other neurosurgical contribution can approach it in the potential opportunity for relieving actual numbers of pain sufferers. Since about 90 per cent of disk protrusions occur either in the fourth or fifth lumbar interspace,[4] the usual picture is that of low back and sciatic pain.

The symptomatology incident to hypertrophied ligamentum flavum is no different from that in disk protrusions although there is some difference in the x-ray findings. The role of the ligament in the causation of low back and sciatic pain is still a question mark. It does appear probable, however, that hypertrophied ligamentum flavum as a separate entity does not exist but occurs as a response to some underlying primary condition, usually a protruded disk. Love noted that 155 of 175 protruded disks showed ligament hypertrophy.[3]

FIG. 3. Roentgenogram showing lipiodol block caused by cervical epidural varicosities.

SIGNS AND SYMPTOMS OF PROTRUDED DISK

1. Root pain most frequently in the *sciatic* distribution.
2. Low back pain with tenderness alongside the lumbar spine at level of disk.
3. Pain aggravated by coughing, sneezing, straining and jugular compression. (Naffziger.)

4. Pain on straight leg-raising down the leg and into the back.
5. Knee is bent and heel is elevated from the floor in standing.
6. Diminished or lost ankle jerk.
7. Hypesthesia of foot and posterolateral aspect of calf; also paresthesia; anesthesia is rare.
8. Muscular weakness or urinary symptoms are rare but occasionally occur.
9. Increased spinal fluid protein.
10. Narrowing of intervertebral space.
11. Demonstration of disk protrusion by air or lipiodol myelography; characteristic filling defect.

We still feel that lipiodol or air as contrast media must remain as the court of last appeal. They at least show us the lesion and prove it to be surgical. Typical x-ray findings are shown in figure 2*a*, *b*, *c*, *d*, *e*, and *f*.

I do not think for a minute that all low back pain and sciatic pain is due to disk protrusion, but a surprising number of those cases which are chronic and recurrent will

FIG. 4. Roentgenogram showing epidural varicosities producing filling defect similar to protruded nucleus pulposus.

have this origin and may be completely and permanently relieved by surgery. All patients should have thorough orthopedic and pelvic examinations, etc., prior to neurosurgical studies.

As time goes on the operation for protruded disk becomes less formidable so that now only a small laminectomy, leaving most of the spinal bony structure intact, usually provides ample exposure for removal of the offending disk.

I have operated on fifteen protruded disks with complete relief of pain in nine cases. One of these patients had a second exploration with removal of a second disk before relief was obtained. Of the remaining six patients, only two have any measurable disability.

While a new tonic has been injected into the realm of spinal canal surgery by these new contributions, probably all is not yet known. There still occurs a goodly percentage of cases in which, following the removal of disk protrusions, relief is not secured. Another significant fact is that there are a few patients presenting typical epidural, or root syndromes who at operation give negative findings. One-fourth of these patients get complete relief from mere decompression.

Is there another epidural condition which we are overlooking? I wish to describe a syndrome caused by epidural spinal varicosities which I have observed in six cases and which may serve to clear further this interesting field. This syndrome has not been entirely overlooked and various reports have occurred in the literature describing "venous dilatation,"[2] "epidural hemangioma," etc., No reports have specified epidural varicose veins or varicosities, and yet why should the internal vertebral plexus be free of this disease which so frequently affects venous plexuses elsewhere in the body? Varicosities are painful wherever they occur. They should produce intense pain in the spinal canal if they occur here.

Extremely severe pain referred to the spine and nerve roots, aggravated by the posture which would allow the veins to become distended, was characteristic in these cases. I should like to list the significant features of their symptomatology.

SYMPTOMS OF SPINAL EPIDURAL VARICOSITIES

1. Severe root pain, so severe as to prevent sleep at night and often necessitating frequent change of position.
2. Pain relieved when the area of the spine affected is elevated above the heart level. Thus, a patient with cervical varicosities is more comfortable in the sitting posture while varicosities in the lumbar region are relieved by lying down or elevating the hips.
3. Neurological findings and subjective symptoms such as motor weakness, numbness, paresthesias, and so forth, are variable according to elevation or dependence of lesion.
4. Coughing, sneezing, straining and jugular compression aggravate pains.
5. The Queckenstedt test may be positive for block or partial block (four out of six cases).
6. Level of the block may be shown by lipiodol or air myelography.
7. Veins at operation appear as a mat of dilated

venous channels, containing some fibrous tissue and little of the normal epidural fat. The veins are tough but bleed profusely when torn. Microscopically the veins show marked thickening; they may show marked dilatation.

CASE REPORTS OF EPIDURAL VARICOSITIES

CASE 1.—Mrs. N., age 28, referred by Dr. Gibbs Milliken, complained of severe girdle pain in the upper abdomen, which began seven months previously. Pelvic operation afforded no relief. She had been unable to lie down for three months since this aggravated her pain greatly and she was taking

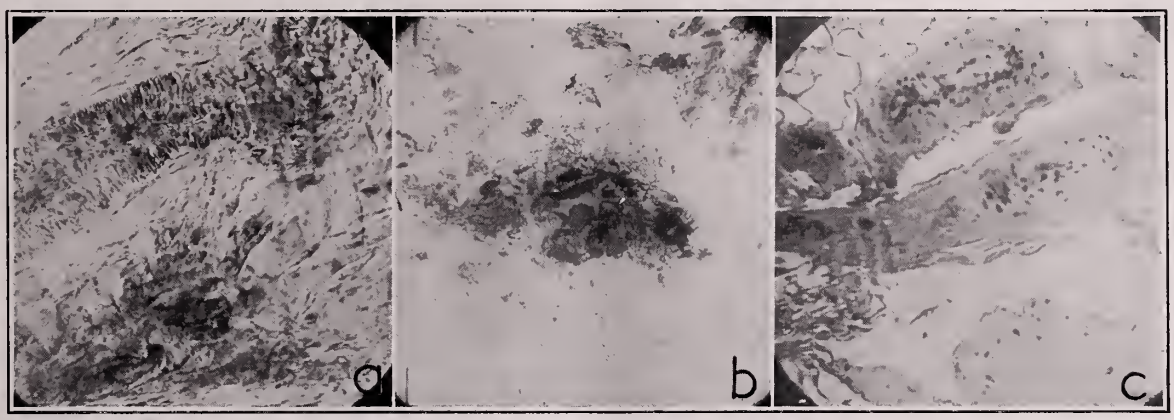

FIG. 5*a*.—Photomicrographs of epidural varicosities. Vein shows hypertrophy of intima, loss of elastic fibres and intravenous fibrous tissue.
b.—Epidural varicosities. Some epidural fat present. Note thick walled veins. Occlusion of one vein.
c.—Epidural varicosities. (High power of *b*.) Note thick walled veins, absence of elastic fibres. One occluded vein.

from one to two grains of morphine daily. The neurological examination was negative except for hyperesthesia and dysesthesia in the distribution of the sixth, seventh, eighth, ninth and tenth segments and marked aggravation of pain by jugular compression. At Methodist Hospital a Queckenstedt test showed complete block. Lipiodol showed partial block at the thoracic tenth vertebra. Laminectomy of the thoracic sixth, seventh, eighth, and ninth laminae showed marked epidural varicosities which were partially removed. Exploration within the dural sac was negative. She was free of pain in two weeks and has remained so for eleven months.

CASE 2.—Mrs. H. F., age 50, referred by Dr. B. F. Smith, was admitted to Methodist Hospital July 16, 1939, complaining of pain down the right leg in the sciatic region and relieved by having her hips elevated. This she was unable to do, however, because when she lowered her head she became so extremely dyspneic that respirations rose above sixty per minute. We observed several of these attacks. They could be precipitated by jugular compression. She also had numbness in the left hand and arm. The chief neurological findings were loss of pain sense on the right below the lumbar fifth segment; loss of temperature sense on the right below the fourth cervical segment; a positive Babinski on the left, and weakness of the left leg; Queckenstedt test showed complete block, and lipiodol injected into the cistern showed a block at the second cervical vertebra. (Fig. 3). The diagnosis was double tumor—a tumor of the cervical cord and a tumor of the cauda equina.

Two laminectomies were done, four months apart. The cervical exploration revealed enormous varicosities which bulged through the opening as soon as the arch of the atlas was removed. These were coagulated. The lumbar laminectomy revealed varicosities but also a hypertrophied ligamentum flavum. The respiratory symptoms are relieved but there is still some sciatic pain. Although she has had some relief of the leg pain, she must still lie down to obtain complete comfort.

CASE 3.—Dr. H., age 42, was referred by Dr. Nealy of Industry, Texas. This physician had suf-

FIG. 6*a*.—Photomicrographs of epidural thrombophlebites with varicosities. Note the thick walls; infiltration with polynuclear cells. Some would call this epidural granuloma.
b.—Shows vasa vosorum in wall infected vein, and also hypertrophy of wall. Some elastic fibres are still present.
c.—Early epidural varicosities. These are fairly normal veins but are so numerous as to resemble a hemangioma—(lumbar).

fered a slight compression fracture of the fifth cervical vertebra in an automobile accident seven years previously. His chief complaint which began four months before admission was extremely severe pain in the right arm, weakness of the right hand and arm so that he had difficulty operating and some pain in the left arm. Coughing, sneezing and lying down greatly aggravated the pain. He slept sitting up. Neurological examination showed little except hyperesthesia in the cervical fifth, sixth, seventh, and eighth and the first thoracic segments on the right and definite atrophy of the intrinsic muscles of the hand. Queckenstedt showed a complete spinal block. X-ray studies showed some pedicle erosion which extended from the sixth cervical vertebra to the first thoracic vertebra.

Laminectomy of the fourth, fifth, sixth, and seventh cervical vertebrae and first and second thoracic vertebrae revealed the most massive varicosities I have seen, described best as a fibrous venous mat about three thirty-seconds inch thick covering dura and surrounding the nerve roots as they left the canal. These were completely removed by the two-point coagulation forceps, leaving the involved roots perfectly clean. Recovery was stormy due to much gas and severe abdominal pains which are still giving him some trouble. The pain in the arms was completely relieved. A recent communication from him says that he is free of pain and again very busy with his practice. Histological sections showed thick-walled veins with small lumen and some dilatation. (Fig. 5*a*.)

The fourth (L. P.) and fifth (O. W.) cases showed low back and sciatic pain and were diagnosed preoperatively as protruded nucleus pulposus. Lipiodol showed typical filling defects. (Fig. 4). At operation, however, there was no real disk protrusion but the nerve roots in question were surrounded by a very thick vascular network. These were removed by the electro-coagulation forceps leaving the roots perfectly clean. In both cases there has been complete relief of pain. A section of the veins removed in case 5 are shown in figure 5*b* and *c*.

Varicose veins occurring anywhere characteristically show marked hypertrophy of the media and sometimes of the intima. There is loss of elastic fibers and fibrous tissue replacement. This picture probably occurs due to the fact that the veins contract when fixed in formalin. Some veins show dilatation.

The sixth case showed in addition to varicosities, hemangiomatous structure with hundreds of polymorphonuclear cells indicative of infection. (Figure 6*a* and *b*.) This patient ran a low grade temperature and although partial recovery of a complete cord lesion took place following laminectomy, there was a recurrence at a higher level three months later. The patient died and no necropsy was done. This case probably belongs with the infectious groups reported on by Fay[1] and called "epidural ascending spinal paralysis" or Spiller's syndrome.

SUMMARY

An attempt has been made to show something of the evolution of surgery of the spinal canal, particularly as regards space-occupying lesions.

A review of spinal cord tumor symptomatology is given.

The role of protruded cartilaginous disk in the production of sciatic and low back pain is discussed.

The need for more study of hypertrophied ligamentum flavum and its relation to disk disease and other disease of the vertebral column is mentioned.

The possibility of the occurrence of other space-occupying lesions of the spinal canal as yet not thoroughly understood is discussed.

Six cases of spinal epidural varicosities and operative results are briefly reported.

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AMERICAN MUSEUM OF HEALTH

Health—man's favorite subject—outdraws love, music and murder as movie musts, judging from attendance at the Little Theatre in the Medicine and Public Health Building at the World's Fair.

Documentary health movies, designed to educate the general public, have played to capacity audiences since the Little Theatre opened in May. More than 1,400,000 persons, one fifth of the Fair's attendance, have visited the Medicine and Public Health building so far this season.

"With These Weapons," a story of social diseases; "Choose to Live," a two-reel sound film on cancer control; "Let My People Live," which deals with tuberculosis; and "A New Day in Health Protection" have proved of vital interest ot Fair visitors.

The tremendous progress in the diagnosis and treatment of syphilis is pictured in a talking motion picture film that brings to the public for almost the first time graphic presentation to indicate the prevalence of the disease.

The dangers of a cold, how it leads to pneumonia, its treatment by those new discoveries, sulfapyridine and serum, is a familiar story that affects the Wilson family in "A New Day in Health Protection."

This film, like all others in the Medicine and Public Health Building series, imparts information that may prove to be the difference between life and death to some of the thousands who have taken advantage of the opportunity to see it.

SULFANILAMIDE IN UROLOGY*

C. M. SIMPSON, A. M., M. D.
TEMPLE, TEXAS

Urologists have been constantly on the outlook for an ideal, comprehensive urinary antiseptic. With the advent of sulfanilamide and its manifold application in other fields of medicine, early investigation of its value in urinary infections was a foregone conclusion.

Young has pointed out that the two important problems involved in the consideration of an ideal urinary antiseptic are first to obtain a germicide that can be brought in contact with all the bacteria, and second to obtain one that will kill bacteria and at the same time do a minimum amount of damage to body tissues. The essential characteristics demanded of such a drug would be stability; ease of administration, either by mouth or parenterally; germicidal efficiency; ability to penetrate tissues as a dye; elimination in the urine in bactericidal strength; absence of tendency to coagulate blood or precipitate urine; and absence of toxicity. The value and continued use of sulfanilamide in urology will largely depend upon how well the drug conforms to these qualifications.

The chemistry and pharmacology of sulfanilamide and many of its close derivatives have been intensely studied by many investigators, notably Fuller, Marshall, Helmholz, and Long. They have found sulfanilamide as well as most of its related dye products, such as prontosil and neoprontosil, to be stable chemically and relatively inert pharmacologically insofar as the human body is concerned. They may be given by mouth or parenterally in some forms without any local irritation and are quite effective in the blood stream and the urine when given either way. Sulfanilamide as representative of the group permeates practically all of the body tissues and is present more or less in proportion to the water content of the organs. It is one of the few drugs that pass into the cerebrospinal fluid, and Farrell has demonstrated its presence in the prostatic secretion in bactericidal concentration.

From the standpoint of urology, probably the most important characteristic of the drug is its rapid excretion in the urine. In twenty-four to forty-eight hours practically all or well over 90 per cent of the drug is excreted by the kidneys. Some of the drug, however, is changed in the body to the conjugated or inactive acetyl derivative and is excreted in the urine as such. This form constitutes roughly about half of the sulfanilamide excreted, which fact must be considered in evaluating the therapeutic effect of the drug. Because of the rapidity of absorption and excretion, it is essential that the drug be given at four-hour intervals to maintain the proper level of concentration in both the blood and urine. Alyea has recently shown that a damaged kidney will eliminate sulfanilamide in almost direct proportion to the phenolsulphonephthalein excretion and that this dye may be used as a satisfactory guide in administering the drug in cases with definite renal damage. Long has further demonstrated that forcing fluids tends to lower rapidly the concentration in both the blood and the urine.

Just what the exact mode of action of sulfanilamide in control of infections may be is still the subject of investigation. The effect of the drug "in vivo" seems in many cases to be much more pronounced than the effect "in vitro," and the question arises as to whether it acts only on the micro-organism as a simple germicide or in some manner exerts a stimulating effect upon the natural body defenses. A majority of workers seem to agree that it is the bacteriostatic or bactericidal effect of the drug on the micro-organisms themselves which is the most important factor. Helmholz; Osterberg and Helmholz; Long and Bliss; Vest, Hill, and Colston; Kenny; and others have made detailed studies on the antibacterial effect of sulfanilamide on various organisms found in the urinary tract infections. They found that the effect varied with the type of organism; with the amount of infection present, that is, the number of bacteria; and with the concentration of sulfanilamide in the urine. Vest, Hill, and Colston, using urine as a culture media, found this bactericidal action most effective against Staphylococcus aureus, Escherichia coli, Aerobacter, and the Proteus group. In the latter infections sulfanilamide is particularly effective because of the fact that it is almost equally efficient in alkaline or acid urine. Dees and Colston in 1937 first demonstrated the excellent bactericidal effects of sulfanilamide in the treatment of gonorrheal infections. It is not, however, effective against streptococcus faecalis. The concentration of the free drug in the urine necessary to produce bacterial stasis with these various organisms varies from 50 to 300 mg. per cent, and hence a cultural study of the urine is necessary for rational therapy. On the whole sulfanilamide is probably more effective against a larger number of micro-organisms than any other urinary antiseptic thus far brought out, but as noted it has

*From the Department of Urology, Scott and White Clinic, Temple, Texas.
*Read before the Section on Medicine and Pediatrics, State Medical Association of Texas, Dallas, May 15, 1940.

quite definite limitations both in effect on the various types of organisms and upon various strains of the same organism.

One of the chief problems in the use of sulfanilamide is that of its toxicity. Undoubtedly the fear of its many toxic manifestations has prevented its use in many cases where it would have been of value, but this has also probably held down somewhat too indiscriminate use of the drug by those not conversant with its actions. Fatalities are rare, but they do occur. The toxic manifestations of malaise, headache, dizziness, and so forth, are frequent and normally of little import. The significance of the cyanosis is still in doubt. There is a tendency to discount it considerably. Acidosis can largely be prevented by administering soda bicarbonate. Fever caused by the drug is frequently confusing but when established as definitely due to this cause, it should be looked upon as a warning signal of such really serious complications as hepatitis, which is rare, or acute hemolytic anemia, which is more frequent and may prove fatal. Neutropenia and agranulocytosis are the other two most dreaded and disturbing complications. These toxic effects constitute one of the drug's greatest defects as an ideal urinary antiseptic; however, if used only under a physician's care and with proper precautions in the way of close observation, it is after all probably not as great a handicap as it might seem.

The clinical use of sulfanilamide in the treatment of infections of the urinary tract has grown very rapidly. The presentation of this paper in a medical section gives some indication of the marked inroad which its use has made in the urological specialty, many of whose patients this drug has returned to the medical fold from which they long ago strayed. The ketogenic diet, mandelic acid, and finally sulfanilamide with some of its derivatives have greatly simplified the treatment of gonorrhea and many of the uncomplicated bacillurias together with other relatively simple infections. Crenshaw and Cook have pointed out that in cases associated with cicatricial deformity of the pelvis and calices, obstruction due to stone, tumor, congenital deformity, or hyperplasia of the prostate gland, and in cases with marked urethritis, and especially chronic prostatitis, sulfanilamide is much superior to the other drugs.

Probably the most striking clinical results of the sulfanilamide drug group therapy have been reported from its use in gonorrheal infections, where many series show cures up to 90 per cent or more. Treatment in most of these cases has been ambulatory and based on a dosage and fluid intake which will maintain an average blood concentration of approximately 5 mg. per cent. An interesting feature noted by many is the fact that patients who start the therapy after the first week of the disease seem to obtain better results. Just why this should occur has not been adequately explained. The effect of simultaneous local treatment has also received much consideration, and the general conclusion seems to be that local treatment is unnecessary, and so it is usually omitted. The use of fever therapy in those cases responding poorly to the drug therapy alone has given excellent results in many cases. One very definite and valuable feature of sulfanilamide therapy is that it reduces the acute complications of all gonorrheal infections. Furthermore, it so quickly reduces the symptoms and so rapidly changes the clinical picture that the determination of a positive cure has become a much more difficult task. This has increased the possibility of more symptom-free "carriers" and more true recurrences than were formerly encountered. Our own experience in this particular field, while somewhat limited, has given results very similar to the usual average with 53.8 per cent good, 30.7 per cent fair, and 15.3 per cent poor.

The results of sulfanilamide therapy in other types of urinary tract infections, as above noted, have been very striking where the particular type or organism present has been one of the susceptible group. Acute pyelitis and acute pyelonephritis caused by Escherischia Coli usually show a rapid response. With an average daily dose of about 4 Gm., the temperature should subside in five to six days and the urine become sterile in about seven or eight days. If it does not become sterile, the course should be repeated. The urine culture and not the cytological examination should be the determining factor. Pyelitis of pregnancy, though associated with definite obstructive symptoms, has frequently responded well to sulfanilamide therapy, and this is always worth a thorough trial, though recurrences are apt to be frequent. We have found over 80 per cent of our cases of acute pyelitis and pyelonephritis to be cured or definitely improved under sulfanilamide treatment.

Chronic pyelonephritis shows a less ready response to the treatment, as the organisms seem to be more deeply entrenched, and complicating factors such as stricture, prostatitis, calculi, or some other mild form of obstruction are frequently present. The urine may often be temporarily sterilized but relapses tend to occur frequently. The same may be said to be more or less true about

chronic cystitis which practically always has some other complicating factor present.

The value of sulfanilamide in surgical conditions of the urinary tract varies considerably, depending chiefly on the amount of obstruction or deformity present and also somewhat upon the amount of trauma such as might be produced by calculi or actual surgical procedures. Thus, the urine may be fairly well cleared up in the presence of a mildly infected, non-obstructing stone, but in any condition where definite obstruction is present, sulfanilamide elimination is definitely retarded and the effects uncertain. Following surgical procedures, there is also usually retarded elimination, and while obstruction is usually alleviated by the procedure, the damaged tissue seems to prevent any very effective action of the sulfanilamide. For this reason it is used very little postoperatively unless perchance some violent blood stream infection might occur. In our own transurethral resections, for example, we have used sulfanilamide or neoprontosil postoperatively in only about 10 per cent of the cases, as we have always felt that they were of questionable value. We have felt, however, that they are of considerable value in clearing up pus and long standing infections which persisted after the proper healing of the prostatic bed. In general the same may be said to be true of the use of sulfanilamide in practically all other postoperative conditions.

In conclusion it may be stated that sulfanilamide is probably the most valuable urinary antiseptic so far found; however, it falls considerably short of being the ideal antiseptic in that it has very definite limitations in its clinical use because of its various toxic manifestations and its lack of universal application to all organisms.

SYNTHETIC FEMALE SEX HORMONE

Twenty-five girls, ranging in age from 20 months to 12 years, were successfully treated for a gonorrheal infection by the administration by mouth of a synthetic female hormone called diethylstilbestrol, Joseph D. Russ, M. D., and Conrad G. Collins, M. D., New Orleans, report in *The Journal of the American Medical Association* for June 22.

The condition is generally the result of accidental infection from contaminated materials and is common in young girls, especially under the age of 7 years. Its treatment has always been difficult.

In the cases reported by the New Orleans physicians negative smears were obtained in from seven to eighteen days. The substance was crushed and administered in two ounces of milk. The two physicians say that: "The rapidity of cure, the absence of any toxic or deleterious effects and the ease of administration as regards both the family and the physician lead us to believe that it is an ideal drug for the treatment of the condition." They also point out that it is an economical method of treatment.

HOW DOES THE FOLLICLE REACH THE OVARIAN SURFACE?*

ERWIN O. STRASSMANN, M. D.
HOUSTON, TEXAS

Why does the follicle rupture? This question does not seem to be a problem, especially, since we know the stimulating influence of the anterior part of the pituitary. We take the rupture of the follicle for granted not realizing that the delivery of the unfertilized ovum is a mechanical process which in addition to the endocrine stimulus requires a definite mechanical preparation as is the case in the delivery of the fertilized ovum in obstetrics.

In regard to the graafian follicle one might feel that this is a cyst which cannot but burst after it reached a certain size and after the inside pressure became too great. If that would be a sufficient explanation, why do other cysts in the ovary, pathologic cystomas, and so forth, frequently obtain the size of a fist, of a child's head and more, without bursting, except in rare instances? There must be a histologic anatomic difference.

Follicles start growing deep in the ovarian stroma. While the primordial follicles are found close to the surface the growing ones are found in the deeper layers of the ovaries.

How then do they manage to come up to the surface? As long as we cannot answer this question, we do not know why the follicle finally ruptures.

The work I shall report is a brief summary of research done over a period of eighteen years, first at the University of Freiburg, then at the University of Berlin, Germany, finally in this country at the Mayo Clinic, Rochester, Minnesota, and in Houston, Texas.

TABLE 1.—*Size of Follicle and Its Average Distance From Surface of Ovary.*

Group	Size of Follicle, mm.	Average distance of follicle from ovarian surface, mm.
1	Less than 0.1	0.65
2	0.1-0.2	0.82
3	0.2-0.3	1.3*
4	0.3-0.4	0.91
5	0.4-0.5	0.5

*Development of theca.

The *first step* we had to take in approaching this problem was to make sure whether there is a relationship between the size of the follicles and their distance from the ovarian surface. We cut human ovaries into serial sections, observed all growing follicles and picked the slides showing the point where they came closest to the surface. Here we

*Read before the Section on Obstetrics and Gynecology, State Medical Association of Texas, Dallas, May 15, 1940.

measured the distance micrometrically. Corresponding to the size we formed five groups of follicles and figured the average distance of each group.

Table 1 shows the results. There is first a descensus of the follicles deeper into the ovarian stroma. This is a passive movement caused by the increased pressure in the ovarian cortex. Then, in the third group there begins an ascensus of the follicles. They return to the surface. In the largest group with over half a millimeter diameter the protruding of the ovarian surface sets in.

What causes the ascent of the follicles against the resistance of the cortex? We noticed that the ascensus coincides with the appearance of the theca layers.

Our *second step* therefore was to study these layers and to find out whether they had anything to do with the movement of the follicles toward the ovarian surface.

Studies of typical, small, medium and large human follicles show that the smallest group in human ovaries does not have any theca layers, that these layers when they first appear in growing little follicles are equal at all sides, that finally in the larger groups there is a one-sided thickness of the theca interna present at the upper hemisphere of the follicle. In other words there is an eccentric growth of the theca interna toward the ovarian surface.

The closer the follicles are found to the ovarian surface the larger they are and the more outspoken is the difference between the wide theca interna at the upper hemisphere and the thin theca interna at the lower hemisphere, the upper pole being finally eight to ten times wider than at the lower pole. This one-sided thickness of the theca interna is soft because it consists of crowded, fast multiplying cells with many mitotic figures. The theca externa on the other hand is rich in tissue fibers and poor in cells and therefore hard. It is wide around the lower hemisphere of the follicle and thin at the upper hemisphere toward the ovarian surface, thus like a goblet keeping the growing follicle from expanding to any other side but where the soft and fast growing theca interna provides an area of lower resistance, which is toward the ovarian surface.

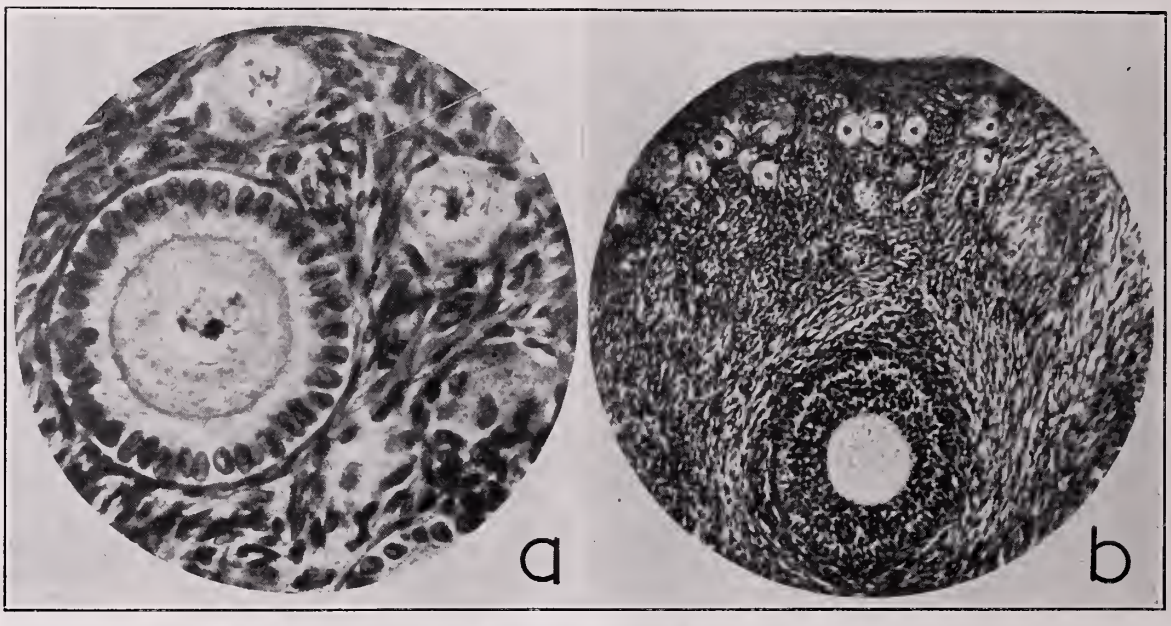

FIG. 1. *a*.—Theca interna cone, triangular thecal wedge, indicated by line, pointing toward ovarian surface. No theca layers around follicle otherwise. One layer of granulosa cells. Small follicle of a rabbit (x325).
b.—Theca interna cone, pointing toward ovarian surface. Beginning development of theca layers around follicle. Multiple layers of granulosa cells. Small follicle of a rabbit (x100).

After these facts had been established in human ovaries the *third step* was to study the ovaries of other mammalian orders because we know that there is no important histologic feature in humans which is not found in animals as well.

TABLE 2.—*Mammalian Ovaries Examined.*

Genus	Order	Microscopic sections, number
Man	Primates	3,000
Cat	Carnivora	3,000
Dog	Carnivora	1,917
Rabbit	Rodentia	1,423
Swine	Ungulata	3,108
Cow	Ungulata	2,874
Horse	Ungulata	3,059
Total		18,381

Table 2 gives the list of animals and

mammalian orders we studied. In order to secure growing follicles we had to get the ovaries in the estrus or pre-estrus which, especially in the larger animals, was not always easy.

First I went over a new set of three thousand sections of human ovaries and three thousand sections of cat ovaries; then together with Erika von Moellendorff we studied over twelve thousand slides of dog, rabbit, swine, cow and horse ovaries, altogether over eighteen thousand slides in four mammalian orders. The number of microscopic slides had to be high because we had to have serial sections of every ovary all the way through. The one-sided thickness of the liferation of the theca interna forms a cone which has a triangular wedge-shaped cut surface.

I shall show the "Theca Interna Cone, as I named this structure, in various mammals, including human ovaries. We found the theca cone in all mammalian orders which we examined: in women, cows, horses, swine, cats, dogs and rabbits, in other words in four mammalian orders. In sections not showing the ovarian surface the area of primordial follicles will always present the cortex; in other words the direction toward the surface.

The smallest follicle with a theca cone was found in a rabbit. (Fig. 1*a*.) A group of

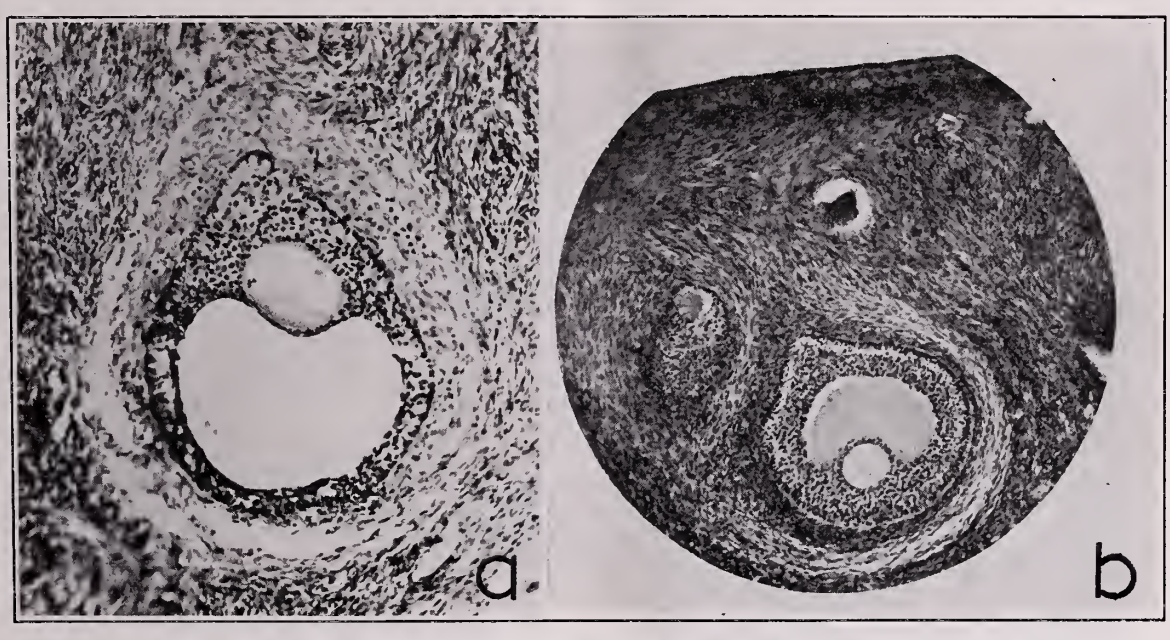

Fig. 2. *a*.—Theca interna cone, granulosa protruding into theca cone. Appearance of liquor. Human follicle (x160).
b.—Theca interna cone, and granulosa cone. Coinciding axes pointing toward ovarian surface. Streamlined adaptation of stroma. Ascending follicle of a cow (x80)

theca interna toward the ovarian surface was confirmed in all mammalian orders examined.

In addition we observed new phenomena, first in the ovaries of cats, then in humans, finally in all other groups which seems to give us the final answer in regard to the ascent of the follicles to the ovarian surface.

The growing follicle develops a sprout such as any seed develops, which has a definite "tropism" toward the nearest point of the surface of the ovary. The one-sided proliferation of the theca interna proved to be only the base of the sprout. The eccentric thickness was found by examining serial sections cut in different directions through the ovary. The cone-like theca interna sprout is found in serial sections cut at a right angle to the surface. In these slides one finds that the proabout twelve theca cells forms a triangular roof on top of the limiting membrane which includes just one row of granulosa cells and the ovum. This follicle otherwise has no theca at all.

The next size group of small follicles is demonstrated in cats, rabbits and humans. (Fig. 1*b*.) Instead of one layer of cells there are several layers of granulosa cells but no cavity yet. All these follicles are elliptic in shape, because the granulosa proliferates faster at the upper and lower pole, as shown in previous papers, than at the sides. On top of the upper pole in all these follicles the triangular theca interna cone is present, its axis pointing always toward the ovarian surface and the region of the primordial follicles. The theca cone penetrates the surrounding stroma like the bow of a ship ploughing a path for

the expanding follicle and providing an area of lower resistance.

Medium-sized follicles are demonstrated in specimens from man, cat, dog, rabbit, cow and swine. They all contain the cavity which gives us the familiar picture of the graafian follicle. The cystic liquor-containing follicle demonstrates the influence of the theca cone upon the follicle readily because it can adapt itself much better to the various degrees of surrounding pressure than the solid earlier form of the follicles. These medium-sized follicles become cone-shaped themselves, their axes coinciding with that of the theca cone.

Figure 2*a* represents a human follicle out of this group. The thecal wedge is fully visible. The granulosa protruding into the cone, becomes wedge-shaped itself. Following the line of least resistance, the follicle, growing in size owing to increasing formation of liquor and proliferating granulosa, follows the path determined by the theca interna growth toward the ovarian surface.

In a follicle of a cow (Fig. 2*b*) we observe the same conditions.

Fig. 3.—Theca interna cone and granulosa protruding in same axis toward ovarian surface. Streamlined adaptation of stroma. Ascending human follicle (x80).

A question could be raised as to whether the wedge-shaped granulosa possesses an active propulsive power like the theca cone. This is not the case. The granulosa is always surrounded by a limiting membrane and cannot infiltrate adjacent tissues, while the theca interna cells invade the ovarian stroma like the syncytium of the chorionic epithelium.

The protrusion of the granulosa into the theca cone is found best when the cumulus ovigerus is located in the upper hemisphere of the follicle. The growth of the granulosa takes place mostly around the ovum. Fast growing tissues rich in cells are soft and, therefore, follow the line of least resistance more easily.

The follicle becomes streamlined, as the human follicle in figure 3 illustrates.

In the group of large follicles conditions remain the same until the ovarian surface is reached. Figure 4*a* shows the upper part of a cat follicle which by its theca cone works its way up between two atretic follicles, pushing them aside with the almost visible power.

Particularly interesting were the findings in horses because they gave the possibility of determining whether my opinion concerning the significance of the theca interna cone is correct. While in other mammals the ovaries have an entirely free surface which permits ovulation to occur at any place of the surface, the ovary of the horse is surrounded by mesovarium leaving only one little spot free, the ovulatory fossa, where ovulation takes place.

In all other mammals studied the theca interna cones grow *divergently* toward the nearest point of the ovarian surface. In horses we found the theca interna proliferating *convergently* toward the ovulatory pit, thereby giving evidence that the theca cone has the special function to bring the follicle up to that part of the ovarian surface where the ovum can enter the peritoneal cavity.

After the ascent of the follicle through the ovarian stroma has been completed the theca cone flattens out, disappears and protrusion of the follicle begins. (Fig. 4*b*.) The pressure within the follicle becomes greater than the pressure of the surrounding tissue. Circulation on top of the vertex of the graafian follicles is interfered with by this pressure. Atrophy sets in at the stigma and the rupture of the follicle takes place in a very smooth manner usually without any bleeding.

After the theca interna cone and its significance for the ascent of the follicles has been demonstrated in human and mammalian ovaries of small, medium and large size, the question arises as to why a typical histologic process such as found in all the mammalian orders examined has not been discovered previously in an organ thoroughly investigated for many generations.

A simple mathematical consideration may explain the situation. (Fig. 5.) The cut surface of a sectioned cone appears triangular in shape only, if the section passes through

the apex of the cone and if its axis coincides with that of the cone.

If sections are made parallel or obliquely to the ovarian surface the theca cone would never show up as such. Even if sections are made perpendicularly to the surface only those running through the apex of the cone show the triangular outline of the theca cone, the others demonstrating only the one-sided thickness of the theca interna as a blunt not pointed structure.

The chance of missing the theca cone, even in studying serial sections is hundreds of times greater than the chance of finding it. This very fact made it necessary to examine a considerable number of ovaries cut in serial sections and from various mammalian orders before we were fully convinced that we were dealing with a typical process in the normal anatomy and physiology of the ovary in humans and mammals.

The presence of gonadotropic hormones is indicated by their follicle stimulating influence. Preparations of gonadotropic hormones are tested by their faculty to stimulate follicular rupture and corpus luteum formation in infantile female animals. In these tests (Aschheim-Zondek test in mice, Friedman test in rabbits) hemorrhage occurs within the follicles. This bleeding is unphysiologic. As mentioned above, normal ovulation occurs without hemorrhage. We know that we are dealing with unphysiologic amounts of gonadotropic hormones if we obtain hemorrhage.

In regard to the diagnosis of pregnancy, we are not interested as to the quantity of hormones the test animals may require for normal ovulation. In regard to the treatment of human beings, however, the quantity of gonadotropic hormones plays an important role. The work of Davis and Koff indicates that the preparations made from pregnant mare's serum are able to stimulate ovulation in man.

Ovulation with hemorrhage means overdosage. We need a test indicating various degrees of follicular stimulation, not only the final stage of follicular rupture. Here may be a place for the theca interna cone as a test for gonadotropic hormones.

The *theca cone* is found in actual growing follicles only. It is never present in primordial follicles. It is not found in resting follicles, if there is such stage at all. It disappears as soon as degeneration sets in. In other words, it is a sign of actual development of a follicle. It, therefore, may be useful as a test for the presence and quantity of gonadotropic hormones.

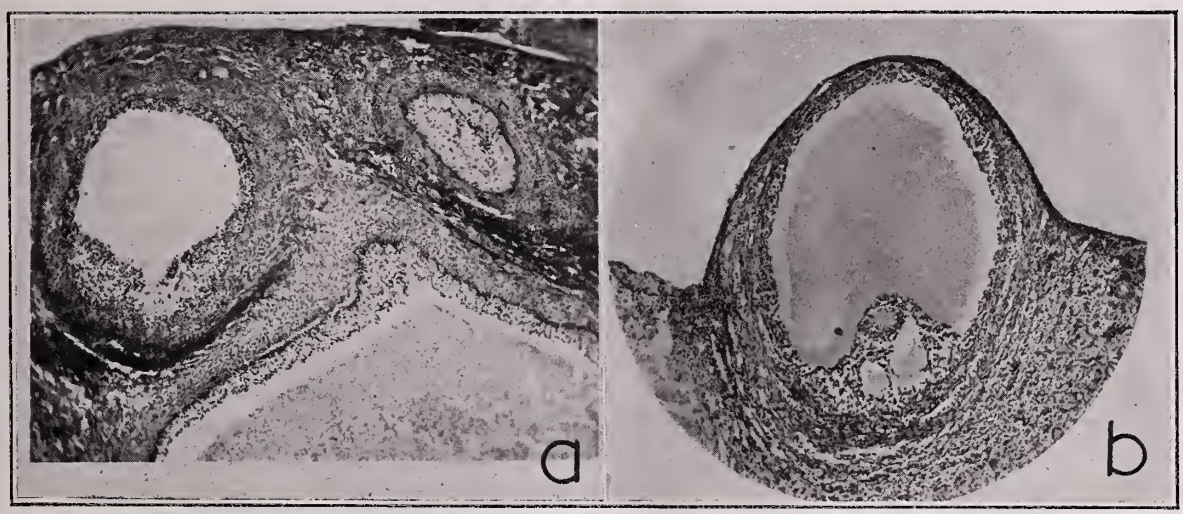

FIG 4. *a*.—Theca interna cone and granulosa protruding toward surface of ovary, pushing aside two degenerated follicles. Large ascending follicle of a cat (x60).
b.—Follicle, ready to burst, final stage. Theca cone disappeared. Marked protrusion of follicle above surface of the ovary. Ascended follicle of a cat (x60).

We have started animal experiments to determine the time necessary for the theca cone to develop and the time required to bring the follicle to the ovarian surface under normal and artificial stimulation. The results may give us a more detailed picture in regard to the dosage of gonadotropic hormones necessary to obtain physiologic follicular growth and ovulation.

SUMMARY

This paper is a report of microscopic work done over a period of eighteen years (1921-1939). It presents the "Theca Interna Cone" and its tropism toward the ovarian surface as a new feature in the normal histology and

physiology of the ovary. The theca interna cone functions as a pathmaker for the ascent of the growing follicle to the ovarian surface. It, therefore, is an integral part of the mechanism of ovulation.

The findings are based upon over 18,000 microscopic serial sections of ovaries in four mammalian orders: Primates (man), carnivora (dog, cat), rodentia (rabbit), ungulata (horse, cow, swine) and are illustrated by photomicrographs showing small, medium and large follicles of various species.

1. The diameter of human growing follicles and their distance from the ovarian surface were measured micrometrically. Corresponding to the size, five groups of follicles were formed and the average distance of each group from the ovarian surface was calculated. It is shown that in the early stages of follicular growth up to a diameter of 0.25 mm. there is a descent of the follicles from the albuginea toward the hilus, and that there

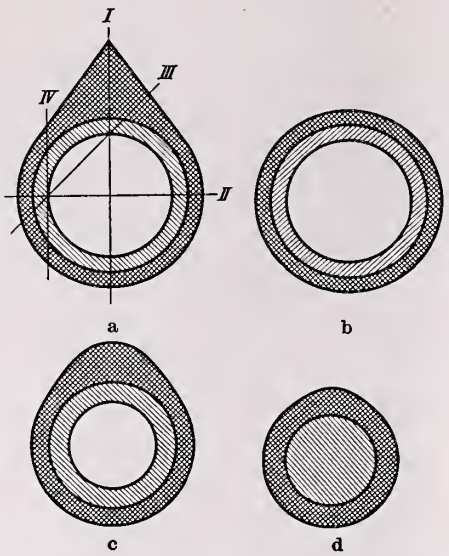

FIG. 5.—Schematic outline of follicle with theca interna cone. Figures a, b, c, and d are obtained when follicle is cut following lines I, II, III, IV, respectively.

is an ascent of the larger follicles back to the surface. This ascensus begins with the appearance of the theca layers.

2. Examination of the theca layers in serial sections shows that their growth is an excentric one. There is present a one-sided thickness of the theca interna, rich in cells, toward the ovarian surface, which in large follicles is from eight to ten times wider at the upper pole than at the lower pole toward the hilus. The theca externa, on the other hand, rich in connective tissue fibers, is wide around the lower hemisphere of the follicle and thin at the upper hemisphere toward the ovarian surface. Thus, the theca externa, like a goblet, keeps the follicle from expanding to any other side except to the surface of the ovary.

3. In serial sections cut perpendicularly to the ovarian surface it is found that there is not only a one-sided blunt thickness of the theca interna but a wedge-like "Theca Interna Cone" with a triangular cut surface which always points to the nearest part of the ovarian surface. This theca cone possesses a tropism toward the surface like the sprout of a seed and plows the path for the follicle by active infiltrating growth through the stroma and albuginea. The follicle proper follows the line of least resistance provided by the theca cone. The granulosa protrudes into the cone, frequently adopting the shape of a cone itself, the axis of which always coincides with the axis of the theca cone.

4. The theca cone is found in all mammalian species examined, including man. In all mammalian species with a free ovarian surface the theca cones grow divergently toward the next point of the ovarian surface. In horses where the ovaries are surrounded by connective tissue, the theca cones grow convergently toward the only free spot, the "ovulatory pit." This proves that *the theca cone fulfills the purpose of bringing the follicle to that part of the ovarian surface where ovulation can take place.*

5. Geometric considerations show that the theca interna cone can be demonstrated as a triangular shaped wedge only in serial sections which are cut perpendicularly to the ovarian surface and which run through the apex of the cone. Sections cut in any other direction will never reveal the theca cone as a wedge-like formation. This must have been the reason why it has not been found before in the ovary, an organ which has been studied by research workers for several generations.

6. *The theca interna cone* is present in actually growing follicles only. It disappears as soon as degeneration takes place. It, therefore, can be used as *a test for gonadotropic hormones.* Rupture of the follicle is useful as a qualitative test, but, if combined with hemorrhage, shows overdosage of gonadotropic hormones. The theca interna cone can be used as a quantitative test, showing the various degrees of stimulation before ovulation occurs. It, therefore, should become useful for determining the physiologic dosage and timing.

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825-827 Shell Building.

ABSTRACT OF DISCUSSION

Dr. Karl John Karnaky, Houston: I have nothing further to add to this beautiful piece of research on human ovulation other than to say that I am interested in ovulation because the ovary apparently causes menstrual irregularities and flooding in women. I have read previous reports by Dr. Strassman on this phase of work. I believe his first paper on this subject appeared sometime in 1928, but I am not sure about this. If we know the physiology, anatomy and pathology of these organs and use treatment based on these facts, it will not fail as often as it will when based on some wild, unscientific medicine promoted by some detail man, with which promotion we are all so familiar. Dr. Strassman is to be congratulated on his research.

TUBERCULOUS UVEITIS*

A CASE REPORT

MAXWELL THOMAS, M. D.
DALLAS, TEXAS

The infrequency of ocular tuberculosis in this locality prompts this case report. In the United States in general there seems to be a difference of opinion as to the infrequency of ocular tuberculosis. O'Brien[6] states tuberculous uveitis occurs frequently but is more common in some localities than in others. Finnoff[2] was more or less in accord with this view but made the statement, "the only possible way to make an exact diagnosis is by miscroscopic examination of the enucleated eye. This, however, is done in a relatively small number of cases."

A number of years ago some pathological slides were obtained from several sources in Michigan for routine study and among them were those of a number of eyes with typical tuberculous changes. This is in contrast to reports here in Texas where the files of the TEXAS STATE JOURNAL OF MEDICINE contain none of an eye on which the microscopic diagnosis of ocular tuberculosis has been made. As to the rarity in Dallas, the pathologists of our two private general hospitals and the Professor of Pathology at Baylor University report they have not seen a single tuberculous eye in these laboratories in twenty years.

There seems to be no controversy as to the type of patient generally affected with ocular tuberculosis, as is evidenced in the literature of the past twenty-five years, particularly the papers of Verhoeff[7], Ellett[1], and Mayer[5]. Lamb[3] states that it is most common in adults, in the third decade, with some predominance in the female.

Again it is generally agreed that rarely is a chronic ocular tuberculosis found in persons with an active tuberculosis. In fact, any serious lesions of the eye in otherwise strong and healthy persons, in cases in which every other possibility of focal infection and syphilis have been excluded, have been classified by some authors as tuberculous.

The types of tuberculosis are not to be classified, but a general discussion of pathologic changes is given which is in accord with the statement made by Wilmer[8] who, in drawing from his personal experience, stated that tuberculosis may involve every tissue of the eye but has a predilection for the sclera, uveal tract and retinal vessels. Such a typical involvement is now reported.

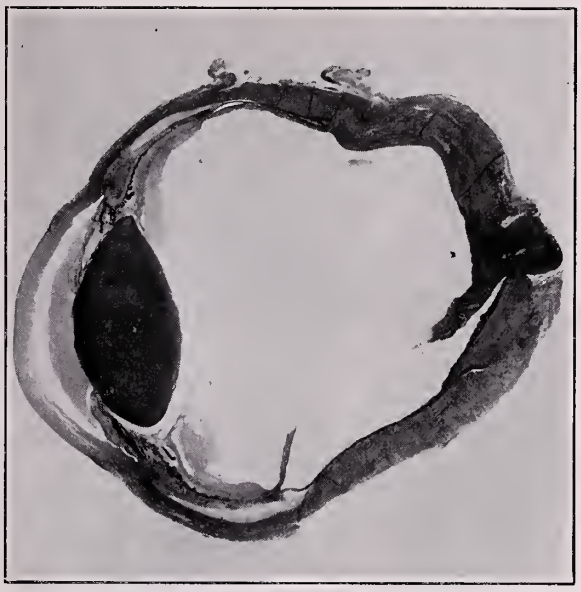

FIG. 1. Atrophic eye ball showing adhesions of the iris to lens, irregular and partial liquefaction of the lens.

CASE HISTORY

A white woman, married, aged 36, because the left eye became sore to touch and remained red, reported to the office, January 14, 1938, for an examination but did not realize the vision was poor in this eye. She had had no previous eye trouble but experienced a marked emotional upset following an accident to her husband which blinded him in both eyes. Her eyes had become both red and irritated from crying incessantly for a week to ten days.

The past history is virtually irrelevant other than the fact she had one child 13 years of age—and had experienced no menstrual disturbances or miscarriages. For one year she had had a vaginal discharge which was quite irritating. She had had no other ailment she could recall.

Ocular Examination.—(First Visit.) Vision of the right eye was 20/20-2, which was not improved with any lens. The eye was clear but for a slight

*Read before the Section on Eye, Ear, Nose and Throat, State Medical Association of Texas, Dallas, May 15, 1940.

conjunctivitis. The pupil reacted to light and accommodation. The tension was normal but a small scotoma was mapped in the visual field. The refractive media was clear with the exception of a few floaters in the vitreous. However, a good view of the fundus showed several areas of chorioretinitis which were inactive. There were two distinct atrophic or pigmented patches, one several disk diameters above from the papilla about one-half the size of the disk. Below, about three disk diameters along the inferior temporal fundus vessels, was a large isolated area three disk diameters in size, irregular in outline with breaking up of pigment.

The left eye was red and injected. Slit-lamp examination showed many precipitates on the posterior surface of the cornea and many cells in the anterior chamber. Fundus examination was inadequate due to the many opacities in the vitreous; however, the nerve head was swollen and a large mass of exudate was seen around the optic disk. Scattered here and there over the fundus were other areas of exudate with the largest one in the periphery inferiorly between the third and fourth bifurcation of the vessels

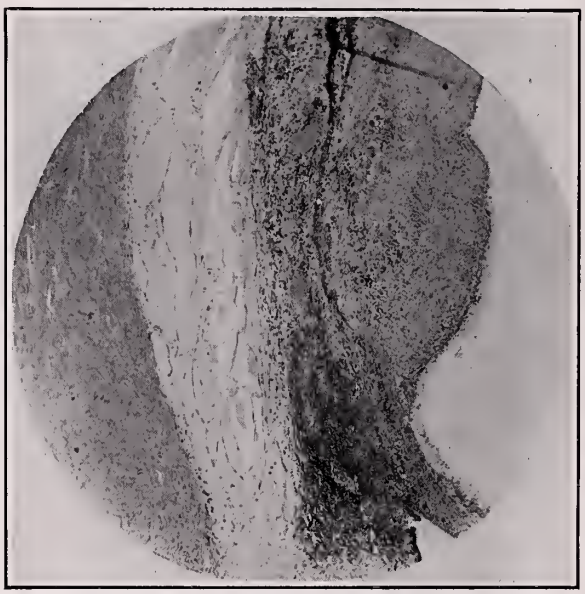

FIG. 2. True tubercle in ciliary body.

nasally. The lens had become swollen, requiring a minus 1.50 S to give a visual-acuity of 20/200. The tension was 18 mm. mercury McLean. A field of vision showed some contraction with enlargement of the blind spot.

Physical Examination (by an internist).—The patient was a rather thin, tall, raw-boned individual somewhat under weight, who had no complaint other than her eye trouble. The chest and abdomen were negative with no roentgenological findings. An endocervicitis was present, which cleared up under treatment; however, no effort was made by a gynecologist to ascertain the organisms. The blood pressure was 105 systolic with a 70 diastolic. The temperature was never elevated.

Head and Neck.—A check of the nose revealed no pus in the nose or evidence of irritation. Roentgen study of the sinuses showed a little thickening of the membrane in the left maxillary sinus; a polypoid tumor was seen on the floor; lipoid injection showed this to be only a slight swelling. The tonsils were small, undergoing atrophy; however, both were slightly cryptic and contained a small amount of caseous material and marked adherence to the pillars and the capsule. These were removed. Roentgenograms of the teeth showed no abscess, though some alveolar absorption was present due to an existing pyorrhea, which cleared up after treatment.

Laboratory Findings.—The urine analysis and blood count were normal. Wassermann, Eagle and Kahn tests in two different laboratories were negative.

Numerous intradermal injections of Old Tuberculin were tried, starting with .0001 mg. on up to .1 mg. and then only a slight reaction occurred. During the period of observation a negative Mantoux test was secured some six times at three to six-week intervals.

On the basis of our findings, a tentative diagnosis of diffuse chorioretinitis was made.

Treatment.—The patient was given a nourishing diet with instructions as to systematic rest. Some fifteen injections of foreign protein were given but with no avail. Iodides and mercury were given for six weeks and also large doses of salicylates and sulfanilamide. Locally atropine and heat were applied.

Subsequent History.—May 5, 1938, the eye seemed to be improving, although the vision remained at 20/200 and the vitreous was filled with floaters. The pupil was kept dilated with atropine.

The patient was not seen for six weeks. During this time the lens became opaque and swollen, push-

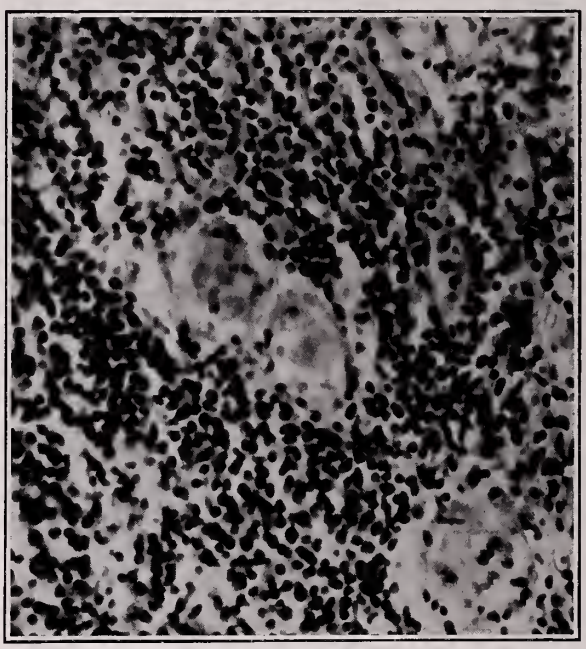

FIG. 3. High power showing lymphocytes, epithelioid and a few giant cells.

ing the iris forward and the tension was 38 mm. mercury McLean. The fundus could not be seen but the corneal precipitates were fewer and there were not so many cells in the anterior chamber. Discomfort became more pronounced but the use of pilocarpine relieved her.

September 18, 1938, the eyeball was quite soft, the pupil dilated and virtually no anterior chamber existed. The intraocular tension was 10 mm. mercury McLean. She had gained some ten pounds in weight and felt much better.

February 8, 1939, the patient returned because

the eye had become sore and produced a dull ache over the side of her head.

April 12, 1939, before removal, the eye was shrunken with a decrease in size of the cornea; the iris was atrophic and of a muddy color; vascularization of the anterior surface of the iris, and passage of vessles over the lens anterior surface had occurred. The eye was so soft the tonometer would not register.

April 14, 1939, the eye was removed under local anesthesia. A gold ball implant was done following Roderic O'Connor's modification of Mule's operation. The socket healed uneventfully and promptly so that an artificial eye was comfortably fitted two weeks postoperative.

Microscopic Findings. — The eyeball was very atrophic with the sclera much thickened and the cornea to a lesser degree. (Fig. 1.) The anterior chamber and vitreous contained coagulated albuminous fluid of varying amounts covering the interior of the eye.

A small degree of proliferation of the corneal corpuscles was present with meager infiltration of pus cells. A folding of the posterior corneal lamellae was due to the shrinking of the eyeball.

The chamber-angle was partially closed (Fig. 1) probably as result of the contraction of the globe.

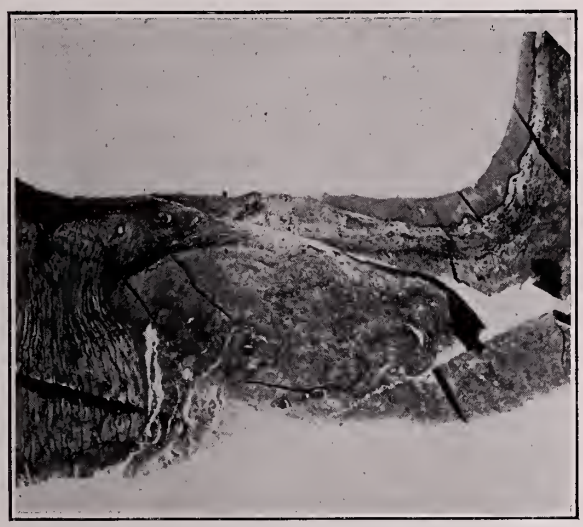

FIG. 4. Necrotic expanse showing no trace of choroid or retina; however, scattered grains of melanin are seen in this area. The marked papillitis is shown.

A few macrophages were seen in the trabeculae and in the coagulated albuminous fluid. On the anterior surface of the lens some macrophages were changing to fibroblasts. Also in the thin pupillary membrane small capillaries had developed and were developing. No corneal precipitates were now seen.

The iris was partly thickened by infiltration with albuminous fluid, small lymphocytes together with plasma cells varying in amounts in different areas. On the side with the small dense collection of small lymphocytes with a scant number of plasma cells, the pupillary margin of the iris together with the inverted sphincter pupillae were flatly adherent to the anterior lens capsule (Fig. 1). On the opposite side such changes were not so pronounced. Atrophic changes of the iris were everywhere, with separation of the pigment epithelium to form cystic spaces. Much irregular proliferation of the pigmented epithelium of the iris was also seen. Numerous loose, single and small collections of pigmented epithelial cells were scattered among proliferated dilator pupillae muscle cells and in the iris stroma, as a part of the atrophy, pigment had partially wandered out of almost all the normally situated dilator muscle fibers.

The lens presented generally a fine vacuolization and a very irregular partial liquefaction of lens-fiber bundles (Fig. 1). A mild degree of lime salts appeared in a thick mass over the anterior cortical region just beneath the lens capsule. The lens capsule was torn in cutting. The anterior epithelium of the lens had proliferated beyond its normal posterior termination at the equator. From the atrophic ciliary body and iris the lens had derived diffusely scattered fine grains of melanin.

The ciliary body contained generally a fluid, thick in albumin, together with varying degrees of in-

FIG. 5. Magnification of the optic nerve showing cellular infiltration and giant cells.

filtration of small lymphocytes and plasma cells. Anteriorly the infiltration was of small degree in the stroma and ciliary process. Posteriorly it became more intense and at the ora serrata on each side the ciliary body and choroid joined to form true tubercles, one side small, the other large (Fig. 2). In both foci, dense numbers of lymphocytes and plasma cells lay externally, and internally were groups of epithelioid and a few giant cells. (Fig. 3.) The pigmented epithelial layer of the ciliary body and retina were absent with complete degeneration of the retina. Over the posterior half of the orbiculus ciliaris, the pigment was diminished in the pigmented epithelium while the unpigmented epithelium had slightly proliferated. Numerous macrophages were seen over the entire inner surface of this region, some of which were becoming fibroblasts. Shrinking of the eyeball had detached the ciliary body. In the intervening space lay albuminous fluid and a few scattered macrophages on the suprachoroideal lamellae.

The choroid was generally atrophic, and the numerous blood vessels had very thin walls or consisted of capillaries. No cellular infiltration existed in the choroid except as mentioned and on one side at two places, close to and a little away from the optic nerve. These two foci of cellular infiltration lay at each end of an extensive expanse of necrotic tissue involving the retina, the choroid and the inner fifth to a half of the sclera. The extent of this necrosis was fully one-half the distance from adjacent to the optic nerve to the ora serrata of that

side. No trace of the retina or choroid remained in this necrotic expanse except for some scattered melanin from the pigmented retinal epithelial cells and from the chromatophores of the choroid and suprachoroidea (Fig. 4). Immediately internal to the necrotic tissue there was a thin layer of albuminous fluid containing numerous nuclear fragments of macrophages, a few greatly swollen red blood-cells and grains of melanin. The necrosis could not have followed a previous specific infiltration in the choroid here because of the narrow uniform thickness of the necrotic area and the fairly regular arrangement of the pigment-remains from the retinal epithelium and from the chromatophores. The only explanation was the presence of tubercle bacilli or their toxins coming from the retinal blood vessels previously present here and deposited in the adjacent vitreous. From the latter place, they could exert their toxic action upon the ocular coats lying just externally. The dense cellular infiltration in the choroid just adjacent to the optic nerve had increased the thickness of the choroid only a little (Fig. 5). The infiltrating cells consisted entirely of small lymphocytes and plasma cells. Internal to this infiltrated part of the choroid, the retinal pigmented epithelium was completely destroyed and the sensory part of the retina was much degenerated. The nuclear layers had completely disappeared and the retina here was considerably thickened by albuminous fluid and adjoining the optic papilla with a moderately dense infiltration of small lymphocytes and plasma cells. Throughout this thickened part of the retina, the neuroglial cells had proliferated in an intensive degree. A large giant cell was present in the extreme internal part of the retina adjoining the vitreous. Just anterior to the anterior end of the necrotic area, the choroid was densely infiltrated with small lymphocytes and plasma cells, containing small islands of epithelioid cells. A large group of these cells lay posteriorly just at the anterior edge of the necrotic area. Here the retina was involved but slightly.

The optic nerve presented a high degree of swelling of the optic papilla due to albuminous fluid and cellular infiltration. There was a small to moderate degree of perivasculitis of the main stems of the retinal vessels. With the optic papilla swelling the structures above were pushed peripherally. On the optic papilla surface and adjoining retina was a thin layer of a moderate number of macrophages from which a great number of fibroblasts had arisen. A few scattered giant cells were present among these superficially lying cells. Extending posteriorly was an irregular infiltration of macrophages and plasma cells. Before and behind the cribiform plate the septa presented much proliferation of the neuroglial cells and a small degree of perivasculitis. The optic nerve was moderately atrophic with infiltration of lymphocytes and plasma cells.

The remaining retina was thickened though the ganglion cells were everywhere destroyed. On the side opposite the necrotic area the neuroglial cells had proliferated to an intense degree. Perivasculitis was similar to that in the optic nerve. In the vitreous, close to the inner surface of the retina, lay numerous macrophages and fibroblasts. The same picture was seen anterior to the necrotic area but in great numbers. Pigmented macrophages were derived from loosened pigment epithelial cells of the retina. Posteriorly these pigmented macrophages had penetrated beneath the inner surface of the retina. Some proliferation and atrophy of the pigmented epithelium were seen here and there.

The living sclera external to the necrotic inner mass of the sclera showed much proliferation of the essential scleral cells. In this region the normal contents of some of the posterior emissaria were destroyed and in their place lay dense numbers of small lymphocytes and plasma cells together, in rare instances, with small groups of epithelioid cells.

DISCUSSION

The infrequency of ocular tuberculosis in the city of Dallas is stressed. A case of chronic ocular tuberculosis is reported in which one eye at an earlier date had a choroidal involvement which subsequently healed leaving an eye with good vision. Nevertheless, the fellow eye, with little pain or inflammatory reaction, went to complete destruction in spite of the fact all possible therapy and removal of foci of infection were undertaken. The removal of the eye was necessary because it became blind, sore, unsightly, red and shrunken.

The existence of lesions in both eyes indicates that the infection was probably due to blood metastasis. The activity of the infection was increased by the lowered resistance of the patient while undergoing a marked emotional stress, at which time she lost weight and became generally debilitated. The clinical examination, personal and family history with physical findings, including roentgen study of the abdomen and chest, was negative. Laboratory reports were within the limits of normal and even large doses of tuberculin gave no positive reaction. In the face of such negative findings and due to the rarity of such ocular tuberculosis in this community, it was somewhat of a surprise when such typical pathologic changes of tuberculosis were found in the enucleated eye, thus emphasizing that a diagnosis of a tuberculous eye lesion in many cases cannot be made with certainty from the clinical picture. It may be assumed that the existence of a severe uveitis resistant to treatment and without any apparent etiological factor should be suspected of being a tuberculous involvement of the eye.

For the pathological report in detail I am indebted to Dr. Harvey D. Lamb[4], who in personal correspondence discussed the cause of the unusual necrosis of the sclera, stating, "the process is analagous to metastatic or endogenous endophthalmitis, where the changes in and from the ciliary body and retina are due to toxins deposited in the vitreous from the cyclitic or retinal blood vessels or from both. Such a necrosis has not been previously described in ocular tuberculosis." Chronic tuberculous uveitis is the only diagnosis that could be made in the presence of the tubercles in the ciliary body and choroid. However, the other changes seen could only be explained as a part of chronic endophthalmitis.

CONCLUSIONS

1. Tuberculous uveitis diagnosed from the enucleated eye is rare, and this is the first case reported from this vicinity.

2. The clinical course of the case described is quite typical but the diagnosis could not have been made without the pathological study.

3. The pathological report is unique; there has not been previously described such a marked necrosis of the sclera, probably due to toxins in the vitreous as a part of chronic endophthalmitis.

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Medical Arts Building.

ABSTRACT OF DISCUSSION

Dr. J. Guy Jones, Dallas: When should we make a diagnosis of ocular tuberculosis? In the great majority of cases this is made from the clinical symptoms, the tuberculin test, exclusion, or by the results obtained with treatment. These criteria can not be conclusive until we have more reports of tissue examination as Dr. Thomas has given. The diagnosis to a large extent, depends, like one's religion, upon the residence of the ophthalmologist and the experiences or the influences of those under whom he was trained. We have in this country, especially among the older men, a focal infective complex. It may be only when all these sources are eliminated that we think of allergy or tuberculosis.

Tuberculosis of the eye is more common than reports indicate. Oculists of wide experience state that they have never treated a case. Others use tuberculin in many obscure eye conditions in the hope that it will clear both the disease and etiology. Verhoeff in 1929 reported a case of localized active tuberculous chorioretinitis in which enucleation was finally necessary, and the diagnosis was confirmed with the microscope. In this paper he made the statement that in the past twenty-seven years he had examined every eye removed in the Massachusetts Eye and Ear Hospital, and many eyes from other sources, and that this was the first one in which he had observed a localized active lesion.

Green's clinic reported in 1939 that in the past five years 221 ocular infections had been diagnosed as tuberculous. Of these patients 62 per cent were males, and the most frequent age was between 30 and 50 years. Chronicity was important; 62 per cent were of one year's duration while 13 per cent had been present from twenty to thirty years. These diagnoses were not corroborated by tissue examination.

Lesions which appear nonspecific may be proven tuberculous, and a negative skin test does not disprove the etiology. A positive test gives no indication of the age, site or size of a tuberculous focus. A focal reaction in the eye is of more importance. It is difficult and usually impossible to find the bacilli in the lesion.

Clinically there is a slow development without pain, and there is considerable involvement before it is discovered. There is a tendency for erosion of the vessels and hemorrhages. There is often a history of a trivial injury, which prepares the soil for the tubercle bacillus. The severe injuries with more congestion and inflammation do not favor the infection. The smouldering, very chronic diseases may be considered as tuberculous. Finnoff tabulated a tuberculous syndrome, corneal deposits, of the mutton fat variety, grey nodules, often evanescent, at the pupillary border of the iris, vitreous opacities, increase of tension and the presence of one or more yellowish tubercles in the choroid.

Dr. Thomas is to be congratulated on being the first in this locality to bring us such a detailed pathological report of a tuberculous eye.

THE PHILOSOPHY OF THE NEW DEAL, A WORLD PROBLEM. A DOCTOR'S POINT OF VIEW*

W. B. RUSS, M. D.,
SAN ANTONIO, TEXAS

"Liberty under law remains the hope of the world. It is not liberty alone, nor law alone. An excess of liberty is anarchy, from which all men revolt. An excess of law is despotism, from which free men revolt. It is our great task 'to combine that degree of liberty, without which law is tyranny, with that degree of law without which liberty becomes license.'"

—*Pettengill.*

For seven years and more a few leaders with the prophet Isaiah's spirit have been warning America against the creeping paralysis of the New Deal, but far too many have followed the example of Balaam. In Isaiah's time, as today, leaders were rewarded with wealth and fame for telling the people what they wanted to hear, but the prophet, realizing there are rewards greater than wealth or fame, told them the bitter truth. Balaam, on the other hand, never even prayed for rain when the wind was in the wrong direction. His name has come down to us as the apostle of expediency. He is the patron saint of the average politician.

It is no longer necessary to deal in prophecy. The day of reckoning is at hand. We now know the result of seven years control over the social and economic life of the nation by emotionally unbalanced reformers and theorists, dominated by faith in their own infallibility and the idea that the state can solve all problems arising out of human relations. The President's left wing advisers, and keepers of the public conscience, in utter disregard of experience and contrary to reason and common sense, have dissipated the energy of the people, wasted their substance, divided them into warring classes, led them to disregard the restraints of morals and religion, and even into the utter folly of trying to change the unchanging laws of nature,

*From an address delivered before the San Antonio Rotary Club, June 7, 1940.

which of course always seem cruel to the weak and foolish.

Our country is threatened with bankruptcy and weakened by class warfare. Misguided labor, encouraged by the New Deal, has devoted its energy to destroying business and industry, upon which the people live. Labor unions under the influence of Communists and racketeers have forced the government to uphold the right to strike but not the right to work. Strange new pseudo-religious sects and so-called peace societies apparently well-financed and directed are springing up to defeat plans for national defense. Sane leadership has been silenced and self-sustaining men and women branded as public enemies. Success has become a crime and failure a virtue. The representatives of business and industry have been harassed, embarrassed, and crowded out of the councils of the nation because they are supposed not to know nor care what happens to the poor nor to society in general.

We are faced with confusion at home and held in contempt abroad because of our foolish search for a short cut to Utopia and for our folly in throwing away so much we had achieved morally, spiritually, and physically in the search for a more abundant life, guaranteed by the makers of a new world.

The people are so confused and demoralized that national unity in this hour of stress seems impossible unless the New Deal with its crazy foreign "isms," its wasting of the nation's resources, and its miracles that never work, is swept out of power.

This is not the time to review the tragic past. We must face the menacing present. It is too late to give heed to the warnings of General Mitchell, our best informed authority on aviation, and of General Hagood, both of whom were publicly reprimanded for having the courage to tell their fellow countrymen the truth about our national defenses. Let us hope that it is not too late to profit by the experience of France, whose Communistic social gains paved the way for the destruction of that great democracy.

The people of America have lost confidence in government by professional politicians posing as statesmen who for the sake of power and place have sold their country down the river. Like Balaam, and like most of the rest of us, the average politician and job-holder is an opportunist. When faced with pressure groups on one hand and duty to his country on the other, he seems to think only of himself, of his job, and of his future. He follows the formula for the hesitation waltz: "One step forward, two steps backward, hesitate and side step."

The responsibility for government, whether good or bad, rests with the citizens themselves, and not with the office-holding politicians. The average office-holder in the matter of both character and intellect is a far better citizen than is the average voter, but in times of great stress and threatened panic, the people lose confidence and surrender their liberty in exchange for security under some form of dictatorship unless they can find a great statesman like Jefferson or Lincoln who can unify the nation and bring order out of chaos without destroying liberty. Unless we are to have a Stalin or Hitler, the United States must find such a man.

The benign dictatorship already established under the 1936 mandate (placing the New Deal in complete control) with the implied power vested in the Executive to over-ride the Judicial and Legislative branches of government is shocked and perhaps stunned by the tragic happenings in Europe, but seems to have nothing to offer the demoralized people except more and more foolish planning and mismanagement of the same kind.

In our search for a leader, flag waving and foolish boasting by self-seeking rabble rousers are not helpful. We must consider the facts. We must keep an eye on the noisy critics of the Federal Bureau of Investigation and the Dies Committee for investigating un-American activities. Protection under the Constitution and Bill of Rights should not be given to the agents of Berlin and Moscow, and we should get rid of the President's ill-chosen advisers, the Communistic fellow travelers who have now turned against him. The sponsors of the Civil Liberties front should be reminded that governments are *destroyed by abuse of the principle upon which they are founded.* America is suffering from an overdose of liberty. France is now paying in blood and tears for following pied pipers to destruction. Their search for an easy way to life; their neglect of national defense while providing safety and comfort for the individual has already soaked the soil of Western Europe with blood. Their women and children are homeless and starving; their civilization *already* destroyed.

Only yesterday our brave and debonair leaders boasted a monopoly of all the human virtues. They were the militant champions of the poor and disinherited. They had a program guaranteed to cure all misery and unhappiness *except that caused by the New Deal itself.* How are they today? We find them trembling in the presence of the greatest danger that has ever faced the civilized world—a danger for which they and their kind in England and France are largely responsible. In the presence of this danger, how stand the members of the Kitchen Cabi-

net, who feel competent to select justices of the Supreme Court and purge the Senators from Georgia, South Carolina, and Maryland? What have these patrons of the Communist Youth Movement, these sponsors of the Civil Liberties left wing front to say of the part they have played in preparing the world for enslavement of the working man here and everywhere? They stand appalled at what their philosophy has done to a free people, and yet they refuse to support any effort to undo the mischief for which they are responsible. Stupid, weak, and terrified, they cling to their faith in Communism. They still prefer slavery under the hammer and sickle to liberty under the Stars and Stripes.

The individual who does not feel safe under the controls of religion, laws, and morals, becomes anti-social. He fails to realize that these rules of life are based upon wisdom and experience. He does not understand that natural laws cannot be changed or circumvented to meet the needs of the weak and foolish. He thinks that wage earners can be helped by destroying wage payers, that the weak can be lifted up by tearing down the strong, that young collegians and confused reformers through government control can run the business and industry of the country and bring order out of chaos.

The New Deal philosophy seeks an easy way of life. It shrinks from the struggle to live. It cringes in the presence of danger, and yet in trying to avoid the pain and horror of poverty, misery, and bloodshed, it has brought all these things to us in such a way as to shock the entire world.

No one knows what the outcome will be. No one knows what can be done, but even a crystal gazer or reader of tea leaves ought to realize that the preparation of America to meet the crisis does not include the planning and direction of national defenses by the enemies of business and industry. This is the time to forget experiments in social reform and to demand of both capital and labor every sacrifice necessary to the public welfare. This is certainly not the time to flaunt in the faces of a distressed people the names of the impractical and visionary do-goods whose foolish planning and persistent meddling is responsible for their present tragic state.

Germany, Italy, Russia, Japan, and other totalitarian states in both hemispheres feel for this country an undying hate. They envy our boasted wealth. They regard us as hypocrites and money-grabbers. Prior to the New Deal, a wholesome fear of the strength and spirit of the people was our protection. Now that fear of the armed strength of America has been replaced by open and frequently expressed contempt, our good-neighbor policy has been mistaken for weakness, and expressions of friendship have been denounced as insincere and prompted by self-interest.

This is not the time to lament the follies of the New Deal, nor is it the time to shrink from the danger resulting from our tragic mistakes. The nation has the right to expect united and enthusiastic support from all right-thinking men and women. Leaders of industry, business, and labor must place the safety of our country above every other thought. Emotionally unbalanced sentimentalists holding places of power in government, and also those skulking in the dark and opposing rearmament plans must be ignored or kicked out. The subversive elements representing Communism, Nazism, Fascism, should be treated here exactly as Stalin, Hitler, and Mussolini (whom they so much admire) treat their critics and opponents in Russia, Germany and Italy.

It is worthy of note that at this critical time the militant and boastful champions of the "forgotten man" are frustrated and trembling with fear, while the men and women denounced as public enemies are the only ones who are not afraid and do not cringe in the presence of danger. Does anyone think that Senators George, Smith and Tydings among the politicians, or the man like General Hagood of the Army, or the hardy men whose business and industry have been destroyed are afraid? They have had time to prepare for this day. Now that the tragedy faces us, they stand with bowed heads, embarrassed because their country is treated with contempt and is hated by the whole world, but with the supreme confidence of brave men, they are bracing themselves against the storm. For whatever is salvaged from the wreckage, we will have them and their kind, not our social planners and fomenters of class hatred to thank.

It might be well to recall the state of the South after the Civil War, when the Federal Government under leaders like Thaddeus Stevens and Stanton dealt with the conquered states in the same spirit with which Hitler, Himmler, Goering, and Goebbels are dealing with Poland and Czechoslovakia. The South was all but destroyed by Sherman's total warfare against women and children in his march to the sea. The Confederate states were ruined, their property destroyed, their men killed, their entire population facing starvation. Yankee carpet-baggers were worse than German concentration camps. The new South demonstrates that a strong people always live if they have not lost their sense of *spiritual* values. It shows that char-

acter, energy, courage, and willingness to suffer and die for a principle is the salvation of a nation as it is of a man. It is true that there are still desolate rural areas in the South, impoverished cities, tobacco road people, but in spite of the Kitchen Cabinet, they have leaders like George of Georgia, Smith of South Carolina, and Tydings of Maryland, who have grown up with them, suffered with them, and understand them.

It is the spirit of the old South that makes even the poor follow their real leaders in the struggle to obtain a better life by *the hard way* rather than to accept salvation by food, clothing, housing, and medical care, a program fit for a pig or a cow, but not for a man.

In the life of every living thing including man, there is a spring, summer, fall, and winter. In the beginning there is a spring with energy that gives a zest for living, desire to create, to adventure, to achieve, a spring filled with hope, a seeding time. Then comes summer with its disappointments. The weak begin to falter. The struggle seems too hard. Men yearn for easy lives, for tasks equal to their powers, not for powers equal to their tasks. With the fall come jealousies, hatreds, and despair. The restrains of religion, laws, and morals are forgotten. The weak are concerned only with rights and privileges, not with duties and obligations—the right to live at the expense of their neighbors, the privilege of citizenship in a coöperative society which they neither support nor defend. Finally comes winter and the end. Having failed to live according to the rules of God and man, which have been tested by experience, the distressed, frustrated, and frightened revert to the savage state and destroy themselves. Those without energy, the spiritually and morally dead, become mendicants. Those with sufficient energy left to lead the fightened and stampeded mob become criminals. If time and circumstance favor, they become bandit chiefs, the great outlaws like Mahomet, Napoleon and Hitler.

But always there is another spring. Here in America and in France and England civilization is threatened with destruction. Our energies are dissipated in class warfare. Labor by crippling industry and business faces slavery here and everywhere. Small democracies are crushed because England, France, and America are unable to defend them. We are unprepared for the Winter, but this does not mean the end of the world, or even of civilization. Our mistakes have reduced us to the verge of ruin, but this does not mean the end. There will be another Spring, a Spring without New Dealers, and without myriads of other living forms, that have been too weak to survive the everlasting law of change; a Spring in which man will have the courage and strength to make once more an effort to find a better way of life than the mere law of the jungle; a Spring in which human parasites and mountebanks will not be in control of government; a Spring in which man will once more try to live cooperatively within the framework provided by the restrictions of religion, morals, and common sense, and will respect the unchanging laws of nature.

Sentimental kindness for the weak and foolish; education that offers substitutes for common sense; science that removes obstacles and dangers and provides safety for the timid and unwary; in short, the demand of the weak for an easy way of life with safety first for the individual as its slogan prepared France, England, and America for the Blum, the Chamberlain, and the New Deal governments. The failure of these governments is the result of the abuse of liberty, a weakness inherent in democracy, and a warning that there are no substitutes for common sense and the lessons taught by experience.

The record of these terrible days will in the future show that two organized groups resisted to the end all blandishments and promises and threats of the Washington do-goods and uplifters. It will show that the medical profession and the leaders of the church stood firm in the faith that the American way of life and the democratic principle that built up Czechoslokavia, Scandinavia, the Netherlands, Iceland, and gave the world the once great free governments of France, England, and the United States of America, must prevail unless man is to perish from the face of the earth, or revert to the savage state.

From the beginning of history the doctor and the priest have set the example and upheld the principle that social service and intelligent coöperation must fit into the plan of life designed by God, and, that man's effort to live in accordance with natural laws guided by experience is the hope of the world. They have held the light on the hill and have kept the faith. They have again and again pointed out that *the hard way is the best way.* They have warned against the danger that lies in ease and comfort. They have preached against the folly of trying to remake the world by socialistic and communistic schemes and to change or circumvent natural laws. They have warned that the *strength of the individual must come from within by spiritual means,* and not from without by material things that he can beg or steal; that character, courage, the willingness to sacrifice, and

the joy in using one's energy and strength to meet an unkind but impersonal environment is the only way.

Just as the unbalanced sentimentalists in Washington felt that they were better qualified to lead the distressed people in Georgia, Carolina, and Maryland than were the senators who had grown up with them and understood them, and whose blood was their blood, so did Senator Wagner, Miss Roche, and the horde of reds, pinks, and yellows assembled in the so-called Washington Health Conference insist that only they and their kind were fit to arrange for the care of the sick man, whose problem is always his ability to mobilize and use his own natural body defenses in the fight against disease.

The medical profession and the church have behind them the tradition created by the two social service organizations that have existed from the beginning of history. Every good doctor has in his inmost heart and soul the spirit expressed by Maimonides' prayer at the beginning of his daily work in caring for the sick: "Grant that I may be filled with love for my art and for my fellowmen. May the thirst for gain and the desire for fame be far from my heart. For these are the enemies of Pity and ministers of Hate. * * * Let me be intent upon one thing, O Father of Mercy, to be always merciful to Thy suffering children."

Every doctor and every churchman interested in the care of the sick knows that the poor must not starve and that the helpless must be ministered to. They know that the rich, if there are any left, can take care of themselves. The doctor and the churchman interested in hospitals and in the sick know even better than the New Dealers that the crushing cost of medical and hospital care is too great to be borne by the one man in society who must be kept well, the man of medium and small income who sustains himself and his dependents. The doctor does not accept responsibility for this increased cost of medical care. That story is a long one. What is to be done about it, however, is the business of the medical profession and of the hospitals. They alone are qualified. Upon them rests the responsibility. They have the training and the background, and, therefore, have the right to say that whatever is done must be planned and directed by them and not by the Washington crackpots. That is the only issue.

Medicine has always been socialized in the highest and best sense, but not in the W.P.A. way, nor the Wagner Health Bill way, nor in the labor union way, nor in the Thurman Arnold way. Social service must be rendered to those who can and will try to help themselves. Bare charity is all that can be done for the hopeless, whether they be insane, halt, blind, or just fools and bums. The doctor knows the folly and injustices of classing the courageous and self-respecting poor man who is sick together with the biologically unfit and the hopeless who are beyond all human aid except for food, shelter, and medical care. The doctor and the priest would rather starve with the starving people than to sell their souls by accepting regimentation under Washington bureaucrats. They prefer to help only those who can be helped and to give charity and only charity to the helpless. The church and the medical profession, devoted for more than two thousand years to caring for the sick and ministering to the helpless, regard with horror and loathing the spectacle of Communism and atheism masquerading as friends of the poor and weak. The New Deal, shot through with Communism, is smallpox masquerading as measles.

Let us hope that with the coming of another Spring there will be an end of New Deal philosophy, Communism, Socialism, Nazism, and Fascism, and all the destroyers that have been created and supported by the scared poltroons and stampeded weaklings who have ruined the democratic efforts in England, France, and America, and now place all classes, especially labor and the employers of labor at the mercy of the savage beast, the brutal destroyer, who seems ready for the kill.

The doctor has always insisted that the prevention of disease is the business of government, but that it is the business of the doctor as an artist to help the frightened and demoralized sick to mobilize their own body defenses. The mysterious mechanisms by which the body is defended, science cannot understand, but without them no man survives in his fight against disease or any of his environmental problems. Chemical agents like arsenic, mercury, quinine, and sulfanilamide are useless if the patient has not sufficient power, vitality, and resistance to recover. They are all aids to the doctor, but are not a substitute for the art of helping the patient to build up and use his own defenses.

The fight against disease and the fight against poverty and ignorance and inferiority cannot be won by changing rules any more than any other war or contest can be won by changing rules. The utter folly of trying to change or circumvent natural laws in an effort to create an easy environment for the weak is apparent. Man's only hope is to so strengthen himself morally and spiritually that he can live within these unchanging laws.

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205 Camden.

MISCELLANEOUS

COMING MEETINGS AND CLINICS

State Medical Association of Texas, Fort Worth, May 12-15, 1941. Dr. Preston Hunt, Texarkana, President; Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth, Secretary.

American Medical Association, Cleveland, 1941. Dr. Nathan B. Van Etten, New York, President; Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Southern Medical Association, Louisville, Kentucky, November 12-15, 1940. Dr. Arthur T. McCormack, Louisville, Kentucky, President; C. P. Loranz, Empire Building, Birmingham, Alabama, Secretary-Manager.

Texas Allergy Association, Fort Worth, May 12, 1941. Dr. Boen Swinny, Medical Arts Building, San Antonio, President; Dr. Homer Prince, Medical Arts Building, Houston, Secretary.

Texas Ophthalmological and Otolaryngological Society, Fort Worth, December, 1940. Dr. J. W. Ward, Greenville, President; Dr. Dan Brannin, Medical Arts Building, Dallas, Secretary.

Texas Radiological Society, Sherman, January 18, 1941. Dr. Jerome H. Smith, San Angelo, President; Dr. L. W. Baird, Temple, Secretary.

Texas Club of Internists, Boston, October, 1940. Dr. Carl Lovelace, Waco, President; Dr. George Herrmann, Medical College, Galveston, Secretary.

Texas Association of Obstetricians and Gynecologists, Marlin, Oct. 5, 1940. Dr. H. Reid Robinson, Galveston, President; Dr. Julius McIver, 1314 Medical Arts Building, Dallas, Secretary.

Texas Pediatric Society, Galveston, Oct. 5, 1940. Dr. T. A. Tumbleson, Beaumont, President; Dr. Frank Lancaster, 4409 Fannin Street, Houston, Secretary.

Texas Neurological Society. Dr. Wilmer Allison, Fort Worth, President; Dr. Melbourne J. Cooper, Nix Professional Building, San Antonio, Secretary.

Texas Railway and Traumatic Surgical Association, Fort Worth, May 12, 1941. Dr. G. V. Brindley, Temple, President; Dr. Ross Trigg, First National Bank Building, Fort Worth, Secretary.

Texas State Pathological Society. Dr. Geo. T. Caldwell, Dallas, President; Dr. M. D. Bell, 1109 Medical Arts Building, Dallas, Secretary.

Texas State Heart Association, Fort Worth, May 12, 1941. Dr. Joseph Kopecky, San Antonio, President; Dr. V. E. Schulze, San Angelo, Secretary.

Texas Dermatological Society. Dr. W. A. Smith, Beaumont, President; Dr. Duncan O. Poth, 1230 Nix Professional Building, San Antonio, Secretary.

Texas Surgical Society, Houston, Oct. 7-8. Dr. Walter Stuck, 1426 Nix Professional Building, San Antonio, Secretary.

Texas Orthopedic Society, Fort Worth, May 12, 1941. Dr. W. B. Carrell, Dallas, President; Dr. Ruth Jackson, Medical Arts Building, Dallas, Secretary.

Texas Association of Medical Anesthetists, Fort Worth, May 12, 1941. Dr. Thomas H. Compere, Houston, President; Dr. R. A. Miller, 1415 Nix Professional Building, San Antonio, Secretary.

Texas Society of Gastro-enterologists and Proctologists, Fort Worth, May 12, 1941. Dr. M. O. Rouse, Dallas, President; Dr. Tom E. Smith, 1207 Medical Arts Building, Dallas, Secretary.

Texas Mental Hygiene Association. Dr. Paul White, Austin, President; Dr. Evelyn M. Carrington, Huntsville, Secretary.

Texas Tuberculosis Association. Dr. E. G. Faber, Tyler, President; J. W. Butler, Galveston, Secretary.

Texas Public Health Association, Fort Worth, Oct. 7-9, 1940. Dr. J. W. E. H. Beck, De Kalb, President; Mr. P. A. Kerby, State Department of Health, Austin, Secretary.

Second District Medical Society, Abilene, Nov. 1 and 2. Dr. W. V. Ramsey, Abilene, President; Dr. W. T. Sadler, Merkel, Secretary.

Third, Panhandle, District Medical Society, Lubbock, Oct. 8-9, 1940. Dr. F. A. White, Childress, President; Dr. H. H. Latson, 301 Polk St., Amarillo, Secretary.

Fourth District Medical Society, Ballinger, Oct., 1940. Dr. J. P. Anderson, Brady, President; Dr. O. H. Chandler, Ballinger, Secretary.

Fifth and Sixth, Southwest District Society, Laredo, 1941. Dr. T. E. Christian, San Antonio, President; Dr. W. W. Bondurant, Jr., 1512 Nix Professional Building, San Antonio, Secretary.

Seventh, Austin District. Dr. Joe A. Shepperd, Burnet, President; Dr. A. L. Nanny, Marble Falls, Secretary.

Eighth, Ninth and Tenth District Medical Society, Houston, 1940. Dr. Walter D. Brown, Beaumont, President; Dr. A. A. Ledbetter, Medical Arts Building, Houston, Secretary.

Eleventh District Society, Palestine, Oct., 1940. Dr. Clayton Shirley, Tyler, President; Dr. C. C. McDonald, Tyler, Secretary.

Twelfth, Central Texas District Society. Dr. Dan Warren, Waco, President; Dr. R. K. Harlan, Temple, Secretary.

Thirteenth, Northwestern District Society, Wichita Falls, September, 1940. Dr. Tom Bond, Fort Worth, President; Dr. J. Edward Johnson, Mineral Wells, Secretary.

Fourteenth District Society, Greenville, Dec., 1940. Dr. Ira L. Thomas, Gainesville, President; Dr. R. S. Usry, 1835 Garrett, Dallas, Secretary.

Fifteenth, Northeast District Society, Texarkana, Oct. 8, 1940. Dr. Hugh M. Ragland, Gilmer, President; Dr. J. N. White, Texarkana, Secretary.

CLINICS

Fort Worth Medical and Surgical Clinics, Fort Worth, September 24. Dr. Sim Hulsey, Chairman, Clinic Committee.

SULFANILAMIDE AND STREPTOCOCCI

The failure of sulfanilamide to check infection due to two of the several types of streptococcus, some of which have proved susceptible to the drug, is reported in *The Journal of the American Medical Association* for March 9 by Alexander H. Rosenthal, M. D., and Florence M. Stone, Ph. D., Brooklyn, N. Y.

They cite two fatal cases in which sulfanilamide was given for endocarditis (inflammation of the inner membrane lining of the heart) complicating pregnancy. The infection in one case was due to group B and in the other to group C hemolytic streptococcus (a microbe capable of dissolving red blood cells). The authors believe that theirs is the first reported case of a fatal infection due to the group C streptococcus to occur in a human being.

From laboratory experiments which they carried out on the effect of sulfanilamide on both strains of the streptococcus, Drs. Rosenthal and Stone conclude that the drug has little, if any, effect on these streptococci.

LIBRARY NOTES

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Requests for packages should be addressed "Library, State Medical Association of Texas, 1404 W. El Paso Street, Fort Worth, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Only one package may be borrowed at a time, and packages are allowed to remain in the hands of the borrower for 14 days.

Package Service

Packages were mailed to following from the Library of the State Medical Association during July:

Dr. Frank C. Hodges, Abilene—*Sesamoid Bone* (2 articles); *Osteomyelitis* (5 articles).

Dr. J. C. Loveless, Lamesa—*Pneumothorax* (2 articles).

Dr. M. E. Jacobson, Brownfield—*Syphilis, therapy* (19 articles).

Dr. W. R. McWilliams, Del Rio—*Hernia, strangulated* (1 article).

Dr. Elizabeth A. Taylor, Denton—(2 journals).

Dr. Henry T. Safford, El Paso—*Sphincter Muscles, anal* (6 articles); *Colon, dilatation* (15 articles).

Dr. J. H. Wade, Lufkin—*Tumors, ganglioneuroma* (12 articles).

Mr. Jesse Thompson, San Benito—(1 journal).

Dr. Sam E. Thompson, Kerrville—*Pleurisy, hemorrhagic* (4 articles).

Dr. George M. Waddill, Jr., Amarillo—(1 journal).

Dr. G. E. Glover, Austwell—*Patella, dislocations* (7 articles).

Dr. F. T. McIntire, San Angelo—*Albuminuria, orthostatic* (11 articles).

Dr. Homer B. Johnson, Midland—*Diarrhea, in infants and children* (18 articles).

Dr. Gus Levin, Fayetteville—*Polycythemia* (24 articles).

Dr. Sidney Galt, Dallas—(2 journals).
Dr. Sol B. Estes, Abilene—*Pregnancy, thyroid in* (11 articles).
Dr. S. W. Mantzel, Giddings—*Blood Pressure, low* (14 articles).
Dr. L. C. Biggers, Bonham—*Trichinosis* (25 articles).
Dr. J. D. Casey, San Benito—*Cerebrospinal Fluid* (4 articles).
Dr. Rufus A. Roberts, Pecos—*Neuralgia, trigeminal* (13 articles).
Dr. J. B. Gibson, Abilene—*Oxygen, therapy* (6 articles).
Dr. C. A. Smith, Texarkana—*Curare* (15 articles).
Dr. Paul K. Conner, Jacksboro—*Intestines, anastomosis* (12 articles).
Dr. Roy F. Baskett, Texarkana—*Heat, effects* (5 articles).
Dr. John Chapman, Sanatorium—*Pleurisy, tuberculous* (11 articles).
Dr. C. J. Koerth, San Antonio—(4 articles).
Dr. Hal W. Maxwell, Myra—*Vitamin B* (10 articles).
Dr. John M. Crawford, Carrizo Springs—*Urinary Tract, infections* (13 articles).
Dr. A. R. Shearer, Mont Belvieu—*Undulant Fever* (6 articles).
Dr. A. W. Pierce, Wichita Falls—*Diarrhea, therapy* (14 articles).
Dr. J. E. Stover, Friona—*Asthma, therapy* (9 articles).
Dr. J. P. Lovett, Olney—*Myasthenia, gravis* (15 articles).
Dr. R. G. Bruce, Mineral Wells—*Sclerosis, disseminated* (11 articles).
Dr. Marion R. Lawler, Mercedes—*Vitamins, K* (20 articles).
Dr. Hubert Seale, Abilene—*Infection, focal* (26 articles); *Trachoma, therapy* (8 articles).
Dr. C. C. Collom, Mart—*Undulant Fever* (30 articles).
Dr. G. T. Vinyard, Amarillo—*Osteomyelitis* (14 articles).
Dr. H. A. Mahaffey, Hillsboro—*Psoriasis* (30 articles).
Mrs. Erma B. Connell, Alpine—*Medicine, socialized* (14 articles).
Dr. A. O. Manske, Waco—*Dysentery* (24 articles).
Dr. Neal Hall, Amarillo—*Spider Bites* (10 articles).
Dr. J. M. Bauknight, Ganado—*Tularemia* (20 articles).
Dr. Russell D. Holt, Meridian—(3 journals).
Dr. Ottis Walker, Mission—*Shoulder, pain* (11 articles); *Sulfanilamide, toxicity* (26 articles).
Dr. Fred Harrell, Olney—*Fistula, intestinal* (14 articles).
Dr. C. R. Cockrell, Baird—*Typhus* (17 articles).
Dr. R. W. Varner, Abilene—*Thrombo-Angiitis, obliterans* (18 articles).

Accessions

Year Book Publishing Company, Chicago, Illinois—Sulzberger and Wolf: Dermatologic Therapy in General Practice.

Haynes and George Company, Newark, New Jersey—Fonda: The Era Key to the USP XI and NF VI.

W. B. Saunders Company, Philadelphia—Wilder: Clinical Diabetes Mellitus and Hyperinsulinism; Novak: Gynecological and Obstetrical Pathology.

M. Barrows & Company, New York—Rudy: Simplified Diabetic Manual.

J. B. Lippincott Company, Philadelphia—Becker and Obermayer: Modern Dermatology and Syphilology.

C. V. Mosby Company, St. Louis—Dargeon: Cancer in Childhood.

F. A. Davis Company, Philadelphia—Hull, Wright and Eyl: Medical Nursing.

Charles C. Thomas, Springfield, Illinois—Roesler: Atlas of Cardioroentgenology; Frank Howard Lahey Birthday Volume.

Williams and Wilkins Company, Baltimore—Manson-Bahr: Manson's Tropical Diseases, eleventh edition; Harries and Mitman: Clinical Practice in Infectious Diseases.

Summary

Reprints received, 1,072. Local users, 20.
Journals received, 131. Borrowers by mail, 47.
Items consulted, 47. Packages mailed out, 50.
Items taken out, 41. Items mailed out, 619.
Total items consulted and loaned, 706.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Nonofficial Remedies:

Chorionic Gonadotropin (Follutein).—The water-soluble gonadotropic substance obtained from the urine of pregnant women. This preparation is standardized in international units. One international unit equals 0.1 milligram of a standardized power (see Council Report, *J. A. M. A.* 113:2418, Dec. 30, 1939). Its use is recommended in the treatment of cryptorchidism where there are no anatomic lesions causing obstruction of the testicular descent. The diagnosis of an anatomic lesion can often be made in this manner where this therapy fails; thus the surgical treatment of cryptorchidism may be instituted at an early age. Injections should not be prolonged after six to eight weeks if no descent is obtained, since excessive therapy may result in undesirable responses of precocious puberty and possibly other harmful reactions. The diagnosis of cryptorchidism should not include those cases which have been termed pseudocryptorchids, in which the testes are maintained in the inguinal canal as the result of reflex muscular spasm. Chorionic gonadotropin therapy in other disorders is still considered experimental because of the lack of sufficient published data.

Follutein-Squibb.—A nonproprietary brand of chorionic gonadotropin (follutein)-N. N. R. Both follutein and chorionic gonadotropin are nonproprietary terms. The product is supplied in the following dosage forms: Vials Follutein-Squibb, 500 International Units, Vials Follutein-Squibb, 1,000 International Units and Vials Follutein-Squibb, 5,000 International Units. E. R. Squibb & Sons, New York, N. Y.—*J. A. M. A.*, June 8, 1940.

Benzedrine Sulfate Ampules, 10 mg., 1 cc.—Each cubic centimeter contains 10 mg. of benzedrine sulfate (New and Nonofficial Remedies, 1940, p. 233) in sterile water made isotonic with sodium chloride. Smith, Kline & French Laboratories, Philadelphia, Pennsylvania.

Ampoules Ephedrine Sulfate-Abbott, 0.025 Gm. (3/8 grain) 1 cc.—Each cubic centimeter contains ephedrine sulfate (New and Nonofficial Remedies, 1940, p. 240) 0.025 Gm. (3/8 grain) in chemically pure water. Abbott Laboratories, North Chicago, Illinois.

Ampoules Gold Sodium Thiosulfate-Abbott, 0.075 Gm.—Each ampoule contains gold sodium thiosulfate (New and Nonofficial Remedies, 1940, p. 269) 0.075 Gm. Abbott Laboratories, North Chicago, Illinois.

Ephedrine Alakloid-Squibb.—A brand of ephedrine-U. S. P. (New and Nonofficial Remedies, 1940, p. 235). It is supplied in the following dosage forms: Ephedrine Compound Inhalant-Squibb, solution of ephedrine alkaloid containing ephedrine alkaloid-Squibb, 1.0 Gm., camphor 0.6 Gm., menthol 0.6 Gm. and oil of thyme 0.3 cc. dissolved in light mineral oil base to make 100 Gm.; Ephedrine Inhalant Plain-Squibb, 1 per cent solution of ephedrine alkaloid in a lilac scented mineral oil base. E. R. Squibb & Sons, New York, N. Y.

Ephedrine Sulfate-Squibb.—A brand of ephedrine sulfate-U. S. P. (New and Nonofficial Remedies, 1940, p. 240). It is marketed in the form of capsules 3/8 grain and 3/4 grain. E. R. Squibb & Sons, New York, N. Y.

Compressed Tablets Sulfanilamide-Miller, 5 grains.—Each tablet contains sulfanilamide (New and Nonofficial Remedies, 1940, p. 489) 5 grains. E. S. Miller Laboratories, Inc., Los Angeles.

Ampoules Sterile Solution Caffeine with Sodium Benzoate, 0.5 Gm. (7½ grains) 2 cc.—Each 2 cc. contains caffeine with sodium benzoate-U. S. P. (New and Nonofficial Remedies, 1940, p. 168) 0.5 Gm. (7½ grains) in distilled water. The Upjohn Co., Kalamazoo, Mich.

Hypodermic Tablets Caffeine with Sodium Benzoate, 0.065 Gm. (1 grain).—Each tablet contains caffeine with sodium benzoate-U. S. P. (New and Nonofficial Remedies, 1940, p. 168) 0.065 Gm. (1 grain). The Upjohn Co., Kalamazoo, Mich.

Ampules Caffeine with Sodium Benzoate-Lakeside, 0.24 Gm. (3¾ grains) 2 cc.—An aqueous solution containing in each 2 cc. caffeine with sodium benzoate-U. S. P. (New and Nonofficial Remedies, 1940, p. 168) 0.24 Gm. (3¾ grains). The Lakeside Laboratories, Inc., Milwaukee, Wis.

Ampules Caffeine with Sodium Benzoate-Lakeside, 0.49 Gm. (7½ grains) 2 cc.—An aqueous solution containing in each 2 cc. caffeine with sodium Benzoate-U. S. P. (New and Nonofficial Remedies, 1940, p. 168) 0.49 Gm. (7½ grains). The Lakeside Laboratories, Inc., Milwaukee, Wis.—*J. A. M. A.*, June 15, 1940.

Amniotin in Oil, 5,000 International Units.—Each cubic centimeter contains 5,000 international units of estrogenic substance (New and Nonofficial Remedies, 1940, p. 764). E. R. Squibb & Sons, New York, N. Y.

Elixir Propadrine Hydrochloride.—Each fluidounce contains propadrine hydrochloride (New and Nonofficial Remedies, 1940, p. 252) 2 grains in a menstruum composed of alcohol 16 per cent, glycerin, sucrose, and water, flavored with oil sweet orange, fluidextract licorice, and oil ceylon cinnamon, and colored with carmoisin (certified) and caramel. Sharp & Dohme, Philadelphia.

White's Thiamin Chloride Tablets, 1 mg.—Each tablet contains thiamin chloride (New and Nonofficial Remedies, 1940, p. 528), 1 mg. White Laboratories, Inc., Newark, N. J.—*J. A. M. A.*, June 29, 1940.

ACCEPTED DEVICES FOR PHYSICAL THERAPY

The following devices have been acepted by the Council on Physical Therapy of the American Medical Association for inclusion in its list of accepted devices for physical therapy:

Holmspray Vaginal Powder Insufflator.—This apparatus provides a means by which powders effective in the treatment of Trichomonas vaginalis and other organisms can be blown into the vaginal cavity. The device consists of a glass bottle, to which is attached spray parts, a rubber shield and rubber bulb. The spray tube is interchangeable and is supplied in sizes for adults and infants. T. J. Holmes Company, Inc., Chartley, Mass.—*J. A. M. A.*, June 8, 1940.

General Electric Galvanic Generator.—This generator is used in muscle and nerve stimulation, common ion transfer therapy and electrolysis. It is a portable unit 15 inches wide, 11 inches deep and 6¼ inches high. Models are equipped for operation on alternating and direct current. The unit was submitted to clinical trial and found to be satisfactory for use in common ion transfer and muscle stimulation. General Electric X-Ray Corporation, Chicago.

Burdick SWD-52 Short Wave Diathermy.—A portable short wave diathermy unit designed for medical and minor surgical diathermy. The unit is similar to the previously accepted SWD-50 except that a cable with its output circuit and power control rheostat have been provided. Standard accessories include three condenser pads and two cuff electrodes of different sizes and one twelve-foot cable. Surgical accessories and a lower cabinet to support the unit are optional. Radio interference is minimized by steel construction, insulation and an inductance capacity filter in the line supply. The apparatus was used clinically by the Council and was found to be satisfactory. It was efficient in tissue heating with cable and cuff technics. Burdick Corporation, Milton, Wis.—*J. A. M. A.*, June 22, 1940.

PROPAGANDA FOR REFORM

The Treatment of Habital Abortion With Vitamin E—The Council on Pharmacy and Chemistry authorized publication of a report, prepared for it by one of its referees, on the value of viatmin E in the treatment of various disorders, particularly with reference to its alleged usefulness in habitual abortions. A critical examination of the evidence presented during the last eight years led to the following conclusions:

Claims that vitamin E (wheat germ oil) is of value in the treatment of menstrual disorders, failure of lactation and the vaginal pruritus after the menopause cannot be accepted because of lack of sufficient clinical evidence.

The claim that vitamin E is of value in the prevention of habitual abortion cannot be accepted because of the lack of convincing clinical evidence. The diagnosis of habitual abortion in many of the published reports is open to question; the great variation in dosage of vitamin E and the lack of evidence that the preparations used were active make it difficult to attribute any efects claimed for it to the vitamin. Moreover, the expectancy of spontaneous cure in cases of so-called habitual arbortion has not been accurately established.

Although the administration of wheat germ oil probably does not cause the development of neoplasms, unfavorable effects may follow its use in certain cases. These effects are usually not serious.

The published results of the treatment of habitual abortion with vitamin E are sufficiently encouraging to justify further clinical experiment. Such experiments are justified only if preparations of vitamin E of known activity are used and if adequate diagnosis and clinical control can be established.—*J. A. M. A.*, June 1, 1940.

Worthless (trademark) "Cures" Declared Fraudulent.—The Bureau of Investigation of the American Medical association reports that the Post Office Department has issued fraud orders against a "healer" calling himself variously "Dr. Yosmite Nabona" and "Rev. Yomachee." In 1929 Nabona operated his business under the trade style "Navajo Indian Remedies Co., Inc.," located in what was described as "The Navajo Indian village on the edge of the Black Forest" some 14 miles from Colorado

Springs, Colorado. He claimed that several Navajo Indian families were associated with him, compounding his various "remedies." He was said to have treated such serious diseases as cancer and tuberculosis. An exhaustive search through the records of the American Medical Association failed to reveal that Nabona had ever been graduated by or had even attended any medical school in this country or abroad or had been licensed to practice medicine in any state in the union on the basis of any diploma issued by either an American or a foreign medical college. In 1932 Nabona moved to Long Beach, Calif. At that time he advertised that he would treat his Colorado patients by mail. In July, 1933, a Denver paper was quoted as saying that Nabona had recently been arrested in Arizona and was to be deported on the ground that he was not an Indian but a German and had entered this country illegally. In June, 1934, practically the same information came from Washington, D. C., but apparently the deportation proceedings were dropped. About this time the Department of Agriculture seized in interstate commerce quantities of "Navajo Indian Herbal Teas" that had been shipped by Navajo Industries Co., Inc., and Paul Anacker, alias Dr. Yosmite Nabona, on or about March 29, 1933. Analysis by government chemists were said to reveal that the various products consisted chiefly of cut dried herbs, essentially as follows: For asthma, elder flowers and coltsfoot; for "hardening of the arteries," yarrow and horsetail; for neurasthenia, camomile, lavender and mint, and the one designated loosely for "stomach trouble" was essentially fenugreek and aloe. In Nov. 21, 1934, a jury found the defendants guilty on all counts and the court imposed a fine of $200 against the Navajo Industries Co., Inc., and $200 against Yosmite Nabona (alias Paul Anacker) on one count of the information, arresting judgment on the remaining five counts. On December 5, Nabona was placed on probation for two years on condition that he pay the fine within that period. Subsequently the Post Office Department began to investigate him on finding that he had been operating since 1936 under two new names, Ajna Indian Herb Co. and Ajna Indian Preparations, at Hot Springs National Park, Ark. At this time his mail-order nostrums were being sold under the trademark "Worthless"! The Post Office memorandum brought out that though Nabona represented his products as being "herbal" mixtures and actual Indian remedies, some of them were, in fact, composed of milk sugar and small amounts of mineral substances, and all were purchased from pharmaceutical concerns in New York and Missouri. The Post Office memorandum charged that the sale of Nabona's products through the mails constituted a fraud and on July 24, 1939, fraud order was issued again "Dr." Yosmite Nabona, Ajna Indian Herb Co., Ajna Indian Preparations and their officers and agents as such. But Nabona moved to Milwaukee, adopted the name "Rev. Yomachee" and again engaged in the activities that had brought on the order against his Arkansas business. Consequently on Sept. 29, 1939, a supplementary fraud order was issued to cover the name "Rev. Yomachee." *J. A. M. A.*, June 29, 1940.

Misbranded "Patent Medicines."—The Bureau of Investigation of the American Medical Association reports that the following "patent medicines" have been the subject of prosecution by the Food and Drug Administration of the Federal Security Agency which enforces the Food, Drug and Cosmetic Act: *Dormalgin* (Lawson M. Luth, Darien, Conn.), each tablet containing approximately 2 grains of aminopyrine and three-fourth grain of a barbituric acid derivative. *E E Powers* (E E Medicine Co., Greenville, S. C.), containing 4.99 grains of acetanilid per powder. *Hed Klear* (Van Patten Pharmaceutical Co., Chicago), containing volatile oils, including eucalyptus and menthol, with grain alcohol, isopropyl alcohol, acetone and water. *Menestrex* (Rex Laboratory, Nashville, Tenn.), containing quinine sulfate (3.8 grains) and potassium permanganate (.08 grain) per capsule. *Peranol* (Peranol Products, Chicago), containing volatile oils, including eucalyptus, camphor and menthol, with about 21 per cent alcohol. *Sodasal* (Sodasal Laboraories, Detroit), containing aminopyrine (about 8 grains per fluidounce), sodium salicylate (33.5 grains and 15 grains respectively, in two specimens), baking soda, sugar and water. *Ung Nigrum* (U. N. Laboratories, Seattle), containing silver nitrate 5.25 per cent, mercury 3.35 per cent and phenol 1.68 per cent. *U. N. Rectal Cones* (U. N. Laboratories, Seattle), containing silver nitrate (0.015 Gm.), mercury (0.062 Gm.) and cocoa butter. *U. N. Vaginal* Cones (U. S. Laboratories, Seattle), containing silver nitrate (0.1 Gm.), mercury (0.02 Gm.) and gelatin.—*J. A. M. A.*, June 29, 1940.

NEWS

Wharton-Jackson Counties Medical Society Entertained.—Members of the Wharton-Jackson Counties Medical Society and their families were entertained June 11, by Dr. Walter E. Whitfield of Edna and Dr. J. M. Bauknight of Ganado, on the spacious lawn of the Whitfield estate, reports the El Campo *News*. A steak dinner was served during the evening.

Cameron Hospital Sold.—Cameron Hospital, formerly owned by the late Dr. W. R. Newton and Dr. E. Rischar of Cameron, became the property of Dr. Rischar June 17, as the result of a partition sale, states the Cameron *Enterprise*. The equipment and building brought $28,600.

Tenth District Postgraduate Refresher Course.—Liberty-Chambers County Medical Society was host to physicians of the Tenth District at a postgraduate refresher course at the City Auditorium of Liberty, June 28, informs the Liberty *Vindicator*. Dr. A. E. Sweatland, Councilor of the Tenth District, presided at the meetings. The group was addressed by Dr. Preston Hunt of Texarkana, president of the State Medical Association.

Guest lecturers were Dr. Robert Moore of Dallas, who spoke on pediatric subjects, including infant care and feeding, immunization and infectious diseases; and Dr. D. Truett Gandy of Houston, who gave three talks on the diagnosis and treatment of syphilis. The course was well attended by members of the district. Dr. A. L. Delaney and Dr. F. S. Griffin were in charge of arrangements, and Dr. E. J. Tucker of the program.

The Cowper Clinic and Hospital, Big Spring, was formally opened to the public July 7, advises the Big Spring *Herald*. The building is a modern one-story structure of white stucco finish on brick tile, with semi-soundproof walls and modern furnishings throughout. In addition to a spacious reception room, two doctors' suites, an operating room, x-ray and clinical laboratory and the usual hospital appointments, the building provides a nursery with five bassinets and eight patients' rooms. The head of the hospital is Dr. R. G. B. Cowper.

Hermann Hospital Ex-residents Association Meeting.—Ex-residents of the Hermann Hospital held their eighth meeting June 28, according to the Houston *Chronicle*. The Association now includes seventy members from fifteen classes. This year at its biennial session it presented its first scientific exhibit, all the material for which came from the Hermann Hospital. From 2:00 to 2:45 p. m. alumni presented

papers and clinics as follows: Breast Tumor, Dr. L. L. D. Tuttle; Abdominal Pains in Children, Dr. Walter Qaultrough; Endocrinology, Dr. A. H. Faris; Orthopedic Conditions Encountered by the General Practitioner, Dr. Ed T. Smith; Functions of the Anesthetist Outside the Operating Room, Dr. J. R. Brady.

The hospital staff held its monthly meeting in conjunction with the banquet. Following the dinner and a short session of the staff, guest speakers were Dr. John W. Spies, dean of the University of Texas School of Medicine, Galveston, and Dr. W. H. Moursund, dean of Baylor University School of Medicine, Dallas.

In the evening, alumni and their wives and guests attended the traditional reception at the home of Dr. Tuttle.

Dallas Medical and Hospital Facilities Increased.—Projects either under way or soon to be started will increase the medical and hospital facilities of Dallas more than $150,000, according to the Dallas *Times-Herald*. One of the largest projects expected to be completed late in August or early in September is a $50,000 wing for the Gaston Hospital. The lower floor of this wing will be occupied by the radiologic clinic of Drs. Martin and Martin, now with Baylor Hospital, and the top floor will provide eighteen additional private rooms, which will be air conditioned as will two operating rooms in the hospital proper.

The Dallas Medical and Surgical Clinic expects to complete a $5,000 wing on the west side of its building about September 1, which will house about $17,500 in x-ray equipment.

The Baylor University Hospital has constructed a $3,000 building in connection with its laundry facilities. The largest project pending is the $70,000 Baylor Medical School Library on which it is hoped that construction will begin by September.

The Dallas County Medical Plan, a group medical service sponsored by the Dallas County Medical Society, was put into operation recently for the first time according to an announcement by Dr. George A. Schenewerk, a member of the board of directors, advises the Dallas *News*. The plan for the present is on an experimental basis and is limited to employees of the Ford Motor Company at Dallas. Each participant pays $1.50 for which he will receive any necessary medical care from the physician of his choice at no further cost. As actuarial data are obtained and the plan proves successful, it is expected to extend it to other employed groups of twenty or more under the age of 65 who can be enrolled to as many as 60 per cent of the entire number. Membership is limited to single men earning $2,000 or less and married men earning $2,500 or less. The plan provides for credits on annual premiums to groups with good medical records.

Officers of the organization are Dr. David W. Carter, president; Orison McDonald, vice-president, and Dr. Everett C. Fox, secretary-treasurer. In addition to the officers the board of directors includes Dr. John G. Young, Bryce Twitty, Dr. Ozro T. Woods, E. J. Gannon, Dr. Guy T. Denton, Dr. George A. Schenewerk, and Dr. Curtice Rosser.

The American Congress of Physical Therapy will hold its nineteenth annual scientific and clinical session at the Hotel Statler, Cleveland, Ohio, September 2-6, inclusive. The mornings will be devoted to an instructional seminar with the scientific program presented in the afternoon and evenings. Registrants may pursue only the individual courses they desire. The complete course consists of twelve lectures of a diversified list of forty-eight. The scientific program itself is composed of papers, demonstrations and motion pictures, covering every branch of physical therapy. There will be a separate scientific program covering eye, ear, nose and throat subjects. Information concerning schedule, fees, and so forth, may be secured by addressing the American Congress of Physical Therapy, 30 North Michigan Avenue, Chicago, Illinois.

American Board of Ophthalmology Examinations.—The American Board of Ophthalmology announces that it will give only one written examination during 1941, throughout various cities of the country, on March 8. Candidates enrolled in the preparatory group who have been advised that they are eligible for examination during 1941 should make application at once to take this written examination. Applications must be made on the regular blanks provided for the purpose and must be received in the Board office before December 1, 1940. Oral examinations in 1941 will be given in Cleveland in May or June and in October at a place to be announced later. The deadline for case reports for the Cleveland Examination is February 1 and for the October examination is July 1.

A special oral and clinical examination will be held on the Pacific coast during 1941, provided there are enough candidates to warrant it. Applications for this examination should be filed before September 1, 1940, so that the Board may complete necessary arrangements. Applicants who desire to take examinations in 1941 should write at once to the American Board of Ophthalmology, 6830 Waterman Avenue, St. Louis, Missouri, for formal application blanks, indicating preference of examination place.

"Osler at Old Blockley" Unveiled.—The famous painting in oil by Dean Cornwell was unveiled at the dedication of Osler Memorial Building on the grounds of the Philadelphia General Hospital in June and later exhibited at the annual meeting of the American Medical Association in New York City. The painting depicts one of Osler's outstanding contributions to medicine, namely, bringing medical students to the bedside of the patient for clinical study. In the painting Osler is shown at the

OSLER AT OLD BLOCKLEY

side of an elderly patient on the hospital grounds. Surrounding Osler are interns who have stopped with him on their way to the autopsy house to observe some of his famous post mortems. The autopsy house, which has been restored as the Osler Memorial Building and which was dedicated on June 8, is shown in the background. The memorial was made possible by a grant from John Wyeth and Brother.

"Osler at Old Blockley" is the second painting in the series "Pioneers of American Medicine" sponsored by John Wyeth and Brother as part of a

project to highlight the contributions of Americans to the advancement of medicine. "Beaumont and St. Martin" was the first painting in the series.

Colored reproductions of "Osler at Old Blockley," suitable for framing may be obtained free by addressing requests to the TEXAS STATE JOURNAL OF MEDICINE, 1404 W. El Paso Street, Fort Worth, Texas.

American Board of Obstetrics and Gynecology Examinations.—The next written examination and review of case histories (Part I) for Group B candidates will be held in various cities of the United States and Canada on Saturday, January 4, 1941, at 2:00 p. m. Candidates who successfully complete the Part I examinations proceed automatically to the Part II examinations held later in the year.

Applications for admission to Group B, Part I, examinations must be on file in the Secretary's office not later than October 5, 1940.

The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board, meeting at Cleveland, Ohio, immediately prior to the 1941 meeting of the American Medical Association.

After January 1, 1942, there will be only one classification of candidates, and all will be required to take the Part I and Part II examinations.

For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh, Pennsylvania.

In response to numerous inquiries regarding special training requirements, the Board desires again to announce that there are three methods of meeting these requirements for admission to the Board examinations: First, by the residency system; second, by the partial residency and partial assistantship method; and third, entirely by the assistantship or "preceptorship method." Details of the residency requirements are given in the Board booklet. The Board will accept in lieu of the formal residency service the training acquired by a candidate serving on an assistant or dispensary staff of an obstetrical and gynecological division of a recognized hospital, under the direction of a recognized obstetrician-gynecologist (preferably a diplomate). The time required for this type of training must be longer than with the formal, more intensive residency type of training, and the allowance of time depends upon the duties and responsibility given the candidate. Applicants lacking all formal special training should have a minimum of five years of hospital, clinic, or assistant staff appointments in the specialty, under approved direction. Teaching appointments without accompanying hospital staff or clinical appointments will not satisfy the Board requirements. A special form amplifying the original application must be filled out to cover the details of such assistantship, or preceptorship type, of training. The Board approves for special training, work done in institutions approved jointly by the Board and by the Council on Medical Education and Hospitals of the American Medical Association.

The Biological Photographic Association will hold its tenth annual convention at the Hotel Schroeder, Milwaukee, Wisconsin, September 12, 13 and 14. The society is interested in the further study of photography as applied to the biologic sciences, and the improvement of its technic. Formal papers will be presented outlining new methods of technic, and there will be informal roundtable discussions. Commercial firms specializing in the manufacture of scientific photographic apparatus and materials will exhibit and explain the use of their products. A salon consisting of natural color and monochrome prints of biologic and clinical subjects will illustrate a very fine degree of perfection in biologic photography.

The membership of the Biological Photographic Association is composed of professional, clinical and biologic photographers as well as physicians, dentists and scientists who are interested in this specialized branch of photography. A quarterly journal is published.

Anyone interested in medical and biologic photography is welcome to attend the annual meeting and to submit prints for the salon. Further information concerning the convention program, salon specifications and membership in the society may be had by writing to the Secretary of the Biological Photographic Association, University Office, Magee Hospital, Pittsburgh, Pennsylvania.

PERSONALS

Dr. D. L. Curb has resigned as instructor in internal medicine at the University of Texas, School of Medicine, and has become associated with Drs. Ledbetter, Ledbetter and Edwards, in Houston, where he will be engaged in the practice of internal medicine, particularly gastro-enterology and gastroscopy.

Dr. Bert C. Ball, Fort Worth, has returned from postgraduate study in cardiology at Pittsburgh, Pennsylvania.

Dr. Lynn Hilbun, Henderson, Texas, is taking six weeks postgraduate study in surgery in Harvard University, Boston, advises the Henderson *News*.

Dr. James H. Pennington, Veterans Hospital, Legion, was recently elected chef de gare of Kerr County Voiture No. 434, Forty & Eight, advises the Kerrville *Times*.

Dr. F. O. Taylor, Winfield, was recently attacked by a hijacker while on a professional call, states the Mt. Pleasant *Times*.

Dr. E. W. Anderson, of Huntsville, was recently elected president of the Lions Club, advises the Huntsville *Item*.

Dr. A. D. Caldeira, Mercedes, recently returned from Montreal, Canada, where he attended the branch medical convention of the British Medical Association, of which he is a member, informs the Mercedes *News-Tribune*.

Dr. R. H. Bells, Columbus, was elected president of the Chamber of Commerce of that city at its annual election meeting, July 27, and *Dr. H. C. Moeller* was named second vice-president, informs the Columbus *Citizen*. *Dr. W. W. Gumm* is a director of the organization.

Dr. William F. McCreight was recently proclaimed one of Kirbyville's most distinguished citizens in the "Progress of Development" edition of the Kirbyville *Banner*, states the Quitman *Democrat*.

Dr. Edward F. Yeager, Mineral Wells, recently took postgraduate work at the Chicago Post Graduate School of Medicine, advises the Mineral Wells *Index*.

Dr. John M. Chapman, Ennis, has been named as the official division surgeon for the Southern Pacific Railroad, succeeding the late Dr. C. P. Cook, informs the Ennis *News*.

Dr. L. J. Grinnel was recently appointed city health officer of Dawson, states the Dawson *Herald*.

Dr. Dean Jones recently appointed local physician and surgeon for the Santa Fe and M. K. T. railroads succeeding the late Dr. O. O. Gain, advises the Dublin *Progress*.

MARRIAGES

Dr. Travis Smith of Winters to Miss Mary Katherine Lewis of Houston, at Temple, June 23, 1940.

Dr. Joseph Dudgeon Walker to Mrs. Nannie Dunlap, both of Houston, July 25.

BIRTHS

To Dr. and Mrs. Abner D. Burg, Houston, a son, Brent Lawrence, March 2, 1940.

SOCIETY NEWS

Austin-Waller Counties Society

June 18, 1940

Present Day Views on Tonsillectomy—L. B. Leake, Temple.
Importance of Treatment of Precancer (lantern slides)—W. A. Chernosky, Temple.

Austin-Waller Counties Medical Society met June 18, in the office of O. A. Trenckmann and O. E. Steck, Bellville, with five members and two visitors present. W. S. Thiltgen, vice-president, presided in the absence of Malcolm A. Jones, president. The scientific program as given above was carried out.

PRESENT DAY VIEWS ON TONSILLECTOMY (L. B. Leake).—It is not often necessary to ligate for hemorrhage but clamps are used for controlling it when practical. Postoperative hemorrhage in the first twenty-four hours is most often encountered in adults, which the essayist controls by cleaning out clots and, with the use of clamps, ligating when necessary. Hemorrhage on about the tenth postoperative day is usually caused by sloughing and is usually easily controlled.

H. E. Roensch asked Dr. Leake if he believed or had observed some babies are born with infected tonsils.

Dr. Leake replied that the youngest child on whom he had done a tonsillectomy was about twelve months old.

W. A. Chernosky of Temple read a paper on the importance of treatment of precancerous lesions, which was illustrated by lantern slides.

The next meeting of the Society will be held in Hempstead, August 13.

Baylor-Knox-Haskell Counties Society

June 18, 1940

(Reported by T. W. Williams, Secretary)

Upper Respiratory Infections—J. W. Youngblood, Stamford.

Baylor-Knox-Haskell Counties Medical Society met June 18, at the Terry Hotel, Munday, with twelve members present. The scientific program as given above was carried out.

The Society voted to adjourn meetings until September 17, 1940.

Big Bend Counties Society

June 25, 1940

(Reported by Joel Wright, Secretary)

Cirsoid Aneurism—Walter Reedy, M. C., U. S. A., Marfa.
Animal Borne Disease Transmissible to Man—Frank P. Matthews, D. V. M., Alpine.

Fort Bend Counties Medical Society met June 25, in Alpine for a dinner and meeting. The scientific program as given above was carried out.

Lieutenant Reedy presented an interesting paper on a rare condition and the treatment used in the case reported was ingenious.

Among animal borne diseases transmissible to man discussed by F. P. Matthews, were rabies, tuberculosis, Bang's disease and equine encephalitis. The tremendous loss of life and economic loss caused by rabies each year in the United States was stressed. It was pointed out that the stray dog in America is the agency to be destroyed if rabies is to be done away with. As evidence of the facts presented by the essayist, one of the members attending the Society received a long distance call during the meeting reporting positive rabies findings in the head of a dog which had bitten a person. The futility of attempting to protect the public from malta fever without disposing of infected animals was pointed out.

Other Proceedings.—The resignation of President J. Campbell Kern of Sanderson, who plans to pursue a fellowship at Vanderbilt, was courteously declined since Dr. Kern will continue his connection with the Society. L. A. Lavanture, Marfa, was elected vice-president to carry on during the present year.

The secretary was instructed to attempt to arrange a program with outstanding physicians in the State, to be held in the Post Hospital, Fort D. A. Russell, in August. Wives of members of the Society will be invited to the next meeting so that they may have an opportunity to organize an Auxiliary.

Cooke County Society

May 20, 1940

Renal Infections—Jo C. Alexander, Dallas.
Pneumonia—Ben R. Buford, Dallas.

Cooke County Medical Society met May 20 at the suburban home of Mr. and Mrs. Floyd Watts, Gainesville, with twenty-two members and visitors present. The scientific program as given above was carried out.

The Society unanimously voted that all health certificates issued by local physicians are to be countersigned by H. H. Terry, director of the Cooke County health unit.

Following the meeting a social hour was enjoyed.

Dallas County Society

May 9, 1940

(Reported by W. W. Fowler, Secretary)

Analysis of Abortions in Parkland Hospital for the Last Three Years (lantern slides)—Julius McIver and J. Collier Rucker, Dallas.
Repair of Cystocele, Rectocele and Prolapse of the Uterus—G. F. Goff, Dallas.
Incidence of Tubal Pregnancy in the Negro (lantern slides)—Dexter H. Hardin, Dallas.
Hyoid Bursitis (lantern slides)—L. A. Nelson, Dallas.
The Glands of the Famale Urethra (lantern slides)—George T. Caldwell, Dallas.
General Systemic Infections as a Sequence to the Paranasal Sinuses—O. M. Marchman, Dallas.
The Educational Needs of Health Officers—J. W. Bass, Dallas.

Dallas County Medical Society met May 9, with seventy members present. Curtice Rosser, president, presided, and the scientific program as given above was carried out.

New Members.—Mack F. Bowyer, Charles N. La Due, and Cecil I. Stall were elected to membership.

May 23, 1940

(Reported by H. B. Decherd, Secretary *pro tem*)

Theory and Practice of the Glycerin Treatment of Urolithiasis—Fred Bruchsaler, Dallas.
The Physical Changes During Pregnancy—F. J. Sebastian, Dallas.
Abdominal Distension and Its Management—Ben F. Harrison, Dallas.
The Use of Sedatives in Children (lantern slides)—John E. Ashby, Dallas.

Dallas County Medical Society met May 23, in the Medical Arts Auditorium, with fifty-six members present. Curtice Rosser, president, presided. The scientific program as given above was carried out.

The paper of Dr. Bruchsaler was discussed by R. E. Van Duzen, and the paper of Dr. Ashby was discussed by M. S. Seely.

Other Proceedings.—W. D. Jones presented a resolution endorsing the activity of the Park Board of the City of Dallas in beautifying White Rock Lake and its vicinity and moved its adoption. The motion was carried.

The Society voted to adjourn during the months of July and August.

President Rosser invited Dr. Schenewerk to talk on the medical insurance plan, and Dr. Schenewerk stated that a full report would be given at a special meeting later.

June 6, 1940

Dallas County Medical Society held a special meeting June 6, in the Medical Arts Auditorium, Dallas, with thirty-four members present.

President Rosser announced the purpose of the meeting was to hear and act upon a report of the economic relations committee on the progress made with a plan of insurance for the lower income group.

John G. Young, chairman of the economic relations committee, read the articles of corporation of the Dallas Medical Plan and stated that the committee would seek permission to enter into contract with one group at present and authority to extend the plan to other groups in the future. He moved that the plan as outlined be approved and put into effect by the board of directors, the board being authorized to proceed with the incorporation of the plan. The motion was duly seconded and carried.

E. C. Fox read the by-laws for the proposed organization and answered questions concerning its operation.

President Rosser stated that in order to effect the organization he had selected a nominating committee composed of R. A. Trumbull, Ben R. Buford and Jo C. Alexander, the committee having been instructed to have nominations ready to present for the board of directors. The board is to be composed of ten members including the president of the Society.

R. A. Trumbull, chairman of the nominating committee, presented the following nominations for the board of directors of the Dallas Medical Plan: David W. Carter, Jr., Ozro T. Woods, Guy T. Denton, Sr., E. C. Fox, John G. Young, G. A. Schenewerk, E. J. Gannon, Jr., O. F. McDonald, and Bryce Twitty, which with President Curtice Rosser makes ten nominees. E. L. Loftis moved that the nominations be accepted, which motion was seconded by C. M. Rosser and carried.

E. C. Fox stated that there would be some expense attached to the organization, such as printed instructions for members and asked if the Society would bear this expense. W. W. Fowler moved that the Society agree to underwrite the expense incurred in the organization up to the amount of $100, which motion was seconded by P. K. Mason and carried.

Hunt-Rockwall-Rains Counties Society

June 11, 1940

(Reported by W. W. Fowler, Secretary)

Pathology of the Cervix—A. L. Ridings, Sherman.
Diet During Infancy and Childhood—Max R. Woodward, Sherman.

Hunt-Rockwall-Rains Counties Medical Society met June 11, in the Court Room of the Municipal Building, Greenville, with T. C. Strickland, president, presiding. The scientific program as given above was carried out.

Pathology of the Cervix (A. L. Ridings).—The anatomy of the cervix was reviewed. Non-malignant lesions of the cervix such as erosions, ulcers, cystic degeneration, polypoid diseases, granulocytic disease, tuberculosis, syphilis, and stenosis were reviewed as a group. The essayist then discussed malignant disease, giving attention to the precancerous stage, the evolution of the disease and metastatic lesions beyond the site of the original growth. The methods of therapy discussed included radical surgery, and radium and x-ray. The paper was discussed by Joe Becton, S. D. Whitten and M. L. Wilbanks.

Diet During Infancy and Childhood (Max R. Woodward).—The essayist gave suggestions in particular to the effect of the low fat diet. The dietary management of various diseases, such as acute infections and gastro-enteritis was reviewed. Other disease states and their dietary management also discussed were pylorospasm, epilepsy, pellagra, anemias, celiac disease, and diabetes. The paper was discussed by W. B. Reeves, W. P. Philips, and W. C. Morrow.

Jefferson County Society

June 10, 1940

(Reported by W. Price Killingsworth, Secretary)

Non-specific Urethritis and Prostatitis—John M. Smith, Port Neches.
The Practical Management of Allergic Problems as Seen in General Practice (lantern slides)—Ralph Bowen, Houston.

Jefferson County Medical Society met June 10, at St. Mary's Hospital, Port Arthur, with twenty-eight members present. H. E. Alexander, vice-president, presided. The scientific program as given above was carried out.

Non-specific Urethritis and Prostatitis (John M. Smith).—The etiology, symptomatology, bacteriology, pathology and treatment of the non-specific urethritis and prostatitis were adequately yet concisely discussed. It was pointed out that many cases of non-specific infection are treated for gonorrhea without proper investigation. Emphasis was placed on the chronicity of the condition. In the experience of the essayist, sulfanilamide and its derivatives had been of little value.

The paper was discussed by Benny Fett, L. C. Heare, Harris Hosen, H. B. Eisenstadt, and L. T. Pruit.

The Practical Management of Allergic Problems as Seen in General Practice (Ralph Bowen).—Allergic problems require the closest coöperation between physicians as consultants. The various treatment difficulties encountered in the allergic child were reviewed. Juvenile abdominal allergy, allergic rhinitis, conjunctivitis, migraine and pneumonia were discussed, with pertinent diagnostic and treatment points presented in each condition. The use of silver salts and oily nose drops in allergy of the upper respiratory tract was deplored. Caution was urged in the use of iodized oil in the bronchial tree for asthma because of its relationship to bronchiectasis. Pollens and their relationship to seasonal hay fever problems and the pollens common to the locality were reviewed. The part of foods, molds, and other environmental factors in the production of allergy was pointed out. Close coöperation with the dermatologist was urged in the handling of allergic skin conditions frequently confused with other skin diseases. Quinine, ragweed, cottonseed cooking oils, and soy bean preparations produce eczematoid skin lesions. Fifty per cent of children who have infantile and juvenile eczemas have asthma later in life. In addition to foods as causative agents, house dust, the inhalants, and contact materials, such as cat and dog dander and hair, feathers, certain materials used in clothing and temperature are important in childhood eczemas. Most acute cases of urticaria are due to foods and drugs; chronic cases are due principally to food infections or of a psychic nature. The value of a carefully taken history in solving allergic problems was emphasized. The paper was discussed by William Smith, Harris Hosen, J. D. Fuselier, J. A. Bybee, and W. P. Killingsworth.

Other Proceedings.—William Smith presented the matter of establishing a special fund to be used in cases of financial trouble, death, or other emergency affecting members of the Society. He moved that a committee be appointed to work out a plan of this character, which motion was seconded by C. H. Todd, Jr., and passed.

Honorary Member.—J. D. Thompson of Port Arthur was elected to honorary membership.

Potter County Society

April 8, 1940

(Reported by J. B. White, Secretary)

Differential Diagnosis of Pelvic Tumors—Willard Cooke, Galveston.

Potter County Medical Society met April 8, in the Assembly Room, Fisk Building, Amarillo, with thirty-seven members and fifteen visitors present. J. H. Vaughn, president, presided and the scientific program as given above was carried out.

DIFFERENTIAL DIAGNOSIS OF PELVIC TUMORS (Willard Cooke.)—Every effort should be made to make an accurate diagnosis of pelvic tumor prior to operation. A detailed discussion of differential diagnosis of pelvic tumors was presented systematically, taking into consideration such features as the size, shape, contour, and consistency of the tumor together with the symptomatology presented. Conditions to be differentiated include pregnancy, ascites, a full bladder, masses in the abdominal wall, tuberculous peritonitis, and carcinomatosis. Case reports were cited.

E. E. Reeves in discussing the paper referred to a case of ganglioneuroma, benign in character, which invaded the pelvis from the hollow of the sacrum.

Guy Owens referred to two cases of splenic tumors.

David M. Marcley emphasized points of differential diagnosis in polycystic kidney disease. The paper was further discussed by M. K. Knight.

Dr. Cooke, in closing, discussed hypernephromata, tumors of the spleen and kidney, fibromyomata and pregnancy, extraperitoneal tumors, and endometriosis.

President Vaughn expressed the appreciation of the Society to Dr. Cooke for his interesting and instructive presentation and also voiced a hearty welcome to the large number of visiting physicians present.

Other Proceedings.—A. B. Goldston discussed the subject of the National Physicians Committee, which matter was also discussed by E. A. Rowley, T. P. Churchill, Howard Puckett, J. W. Hendrick and Calvin Jones of Pampa.

Howard Puckett moved that the Society endorse the work of the National Physicians Committee and that members support the work of the Committee as they saw fit, which motion was seconded.

Norman C. Prince moved that the motion of Dr. Puckett be amended to the effect that each member of the Society be assessed $1 for a contribution to the National Physicians Committee, which motion was seconded by L. K. Patton and the motion as amended was carried, after discussion by E. A. Rowley and David M. Marcley, the secretary being instructed to collect $1 from each member of the Society for the purpose stated.

Kenneth Flamm asked that the proper committee notify members of the Society regarding their day to assist Dr. Charles F. Clayton of Fort Worth with the orthopedic clinic. Following discussion by President Vaughn and W. B. Thomas, the orthopedic clinic was instructed to give the notification requested.

J. R. Lemmon asked for the endorsement by the Society of a proposed Section on Pediatrics of the State Medical Association, provided that such section received the endorsement of the House of Delegates.

T. P. Churchill stated that the Council on Scientific Work of the State Medical Association had expressed its approval of the creation of a Section on Pediatrics of the State Medical Association. The Society voted its approval.

New Members.—Ralph B. Payne was elected to membership.

CHANGES OF ADDRESS

Dr. L. J. Alexander, from Baltimore, Maryland, to Dallas.

Dr. H. E. Auer, from Odessa to San Antonio.

Dr. R. J. Brady, from Galveston to Houston.

Dr. R. Louis Cope, from Houston to New Orleans, Louisiana.

Dr. D. L. Curb, from Galveston to Houston.

Dr. Verner J. Donnelly, from Temple to Plainview.

Dr. Joseph V. Dozier, from George West to Vanderbilt.

Dr. C. H. Frank, from Philadelphia, Pennsylvania, to Texarkana.

Dr. G. A. Grimland, from San Antonio to Lafayette, Louisiana.

Dr. M. H. Jensen, from Sweetwater to San Antonio.

Dr. C. P. Lipscomb, from Mineral Wells to Denison.

Dr. J. R. Maxfield, from San Francisco, California, to Albuquerque, New Mexico.

Dr. L. F. Preston, from Temple to Abilene.

Dr. Anthony F. Rossitto, from Texarkana to Wichita, Kansas.

Dr. E. Stephen Stanley, from San Angelo to Dallas.

Dr. Van C. Tipton, from San Antonio to Austin.

Dr. P. A. Woodard, from Bryan to College Station.

AUXILIARY NOTES

AUXILIARY NEWS

Officers of the Woman's Auxiliary to the State Medical Association of Texas; President, Mrs. William Hibbitts, Texarkana; honorary life president, Mrs. A. C. Scott, Sr., Temple; president-elect, Mrs. S. F. Harrington, Dallas; first vice-president, Mrs. H. Leslie Moore, Dallas; second vice-president, Mrs. A. E. Moon, Temple; third vice-president, Mrs. A. B. Pumphrey, Fort Worth; fourth vice-president, Mrs. Joe B. Foster, Houston; recording secretary, Mrs. Walter A. Minsch, Kerrville; publicity secretary, Mrs. W. F. Armstrong, Fort Worth; treasurer, Mrs. J. Frank Clark, Abilene; parliamentarian, Mrs. J. W. Tottenham, Brownwood; and corresponding secretary, Mrs. Ralph Cross, Texarkana.

Mrs. **William Hibbitts** of Texarkana, Texas, as successor to Mrs. Scott C. Applewhite of San Antonio, resigned, is the twenty-third president of the Woman's Auxiliary to the State Medical Association of Texas. She is the wife of Dr. William Hibbitts, chief surgeon of the Cotton Belt Railroad. Her maiden name was Katherine McCartney, and she is a descendant of a long line of distinguished physicians. She attended the Texarkana public schools and then the St. Mary's Episcopal College, Dallas, where she was graduated. She spent three years at the New England Conservatory of Music, Boston, Massachusetts, where she specialized in piano, and organ. During the past two summers she has done special work at Northwestern University and the University of Colorado.

MRS. WILLIAM HIBBITTS

Mrs. Hibbitts was a charter member of the Bowie-

Miller Counties Auxiliary, which was organized in 1922, and is a past president of this organization. She has twice served as president of the Fifteenth District Auxiliary, and as chairman of various committees of the State Auxiliary. She has twice held the office of historian of the Auxiliary to the American Medical Association, and has served as organization chairman of the National Auxiliary. Due to the geographical location of Texarkana, physicians of that city formerly were members of both the Texas and Arkansas State Medical Societies. In 1935, Mrs. Hibbitts was president of the Arkansas State Medical Auxiliary.

Among her other activities, she has been organist and choir director for many years of the First Presbyterian Church of Texarkana; Dean of the Texarkana Chapter of the American Guild of Organists; charter member of the Texarkana Junior Service League; member of the board of directors of the Texarkana Community Chest; Commissioner of the Texarkana Girl Scouts for many years, and at present is a member of the Girl Scouts Regional Committee.

She is a member of the Sigma Alpha Iota National Music Sorority, and because of her interest in education was made an honorary member of Delta Kappa Gamma, a National Honor Society for women educators.

Mrs. Hibbitts has two children, a daughter, Frances, who is in college, and a son, McCartney, who is a senior in high school.

Although her interests have been varied and interesting, Auxiliary work has always received first consideration, for she has believed that in her club work, her husband's profession has first claims upon her time and talents. She will without doubt receive the hearty support of the general membership during her administration.

Mrs. Scott C. Applewhite Resigns.—Because of illness in her immediate family, Mrs. Scott C. Applewhite of San Antonio resigned from the office of president of the Auxiliary to the State Medical Association of Texas. While Mrs. Applewhite's resignation came as a shock and a disappointment to Auxiliary members, it is readily recognized that the decision was taken only after the most careful consideration by her and the sincerest sympathy of the Auxiliary membership in general is tendered to her during this trying period, coupled with regret that she could not continue as president during the year.

In accordance with the provisions of the Constitution and By-Laws, the first vice-president assumes the office of president for the remainder of the year and this responsibility falls to Mrs. William Hibbitts of Texarkana.

Executive Board Meeting Date Changed.—Due to the change in the office of president, the State Executive Board meeting originally scheduled to be held in San Antonio in July has been postponed to September 10, in Fort Worth. Mrs. William Hibbitts, as president, will be hostess. The place of the meeting will be announced later.

The following changes have been made in the Executive Board: Mrs. H. Leslie Moore, Dallas, will serve as first vice-president and Mrs. Ralph Cross, Texarkana, will serve as corresponding secretary.—Mrs. Walter A. Minsch, Recording Secretary.

Ellis County Auxiliary held its annual picnic supper honoring the doctors of Ellis County, June 27, at the home of Dr. and Mrs. Ted G. Estes, Waxahachie. Supper was served to forty guests at one large table. Following the supper a social hour was enjoyed by physicians and their wives.

Hidalgo-Starr Counties Auxiliary held its regular monthly meeting at the Casa de Palmas Hotel, McAllen, June 13. After dinner with members of the Hidalgo-Starr Counties Medical Society, the Auxiliary held a business meeting in the Sun Parlor of the hotel, with Mrs. G. Van Amber Brown, president, presiding.

Mrs. R. E. Hamme, Edinburg, presented an interesting paper on the "History of the Practice of Medicine in the Rio Grande Valley."

Mrs. L. H. Moore introduced Miss Lucile Ehlinger of McAllen, who gave a humorous reading, which was well received.

Old medicine and instrument bags borrowed from pioneer doctors by Mrs. Hamme, provided an interesting exhibit in connection with the historical meeting.—Mrs. L. M. Southwick.

BOOK NOTES

[1]**Practical Bedside Diagnosis and Treatment.** By Henry Joachim, M. D., Chief-of-Medicine, Israel-Zion and Beth Moses Hospitals; Director of Medicine, Cumberland Hospital and Jewish Sanitarium and Hospital for Chronic Diseases, Brooklyn; Consulting Physician, Syndenham Hospital, New York. Cloth, 816 pages. Price, $7.50. Charles C. Thomas, Springfield, Illinois, 1940.

It was most difficult to review this book as a review should point out first of all, the reason the book was written, and it should indicate whether the book fulfilled its mission. Unfortunately, the reviewer in this instance could not get over the first hump; he could find no *raison d'etre*. If the purpose was to provide a brief summary of the new as well as the old knowledge, it has failed lamentably. This is clearly indicated in the chapter on hypertension. None of the recent ideas of etiology are presented, and the discussion of treatment is inadequate. It would have been better not to have mentioned cyanate therapy if the author only gave the dose as grain 1 t.i.d., when it has been clearly pointed out by all workers in this field that there is no fixed dose for these drugs, but the treatment must be judged by the level of the blood cyanates. If such estimations are not available it is best not to use the drug.

The section on pericarditis with effusion would have been more helpful if more emphasis had been placed on discussion of the veins of the neck as a sign of this condition, as this is probably one of the most helpful clinical signs in the presence of pericardial effusion.

Early surgical drainage is not even mentioned in the discussion of the treatment of lung abscess. Certainly recent advances in thoracic surgery have taught us the necessity of considering this form of treatment before the abscess has become multiple in nature. A surgical consultant should be on hand from the very beginning in the management of a case of lung abscess.

The chapter on multiple neuritis fails to point out the great importance of vitamin B in the etiology of this condition. Vitamin B deficiency was the cause of the majority of the cases of multiple neuritis seen by me in the past two years, and the cure with vitamin B treatment has been striking. How could one treat this subject without placing vitamin B in an important position in the list of causes and treatment of this disease?

[2]**Electrocardiographic Patterns, Their Diagnostic and Clinical Significance.** By Arlie R. Barnes, M. D., Mayo Clinic, Rochester, Minnesota. Cloth, 192 pages. Price, $5.00. Charles C. Thomas, Publisher, Springfield, Illinois, 1940.

The book gets its name from the reproduction of

[1]Reviewed by Samuel A. Shelburne, M. D., F. A. C. P., Dallas, Texas.

[2]Reviewed by DeWitt Neighbors, M. D., Fort Worth, Texas.

diagrammatical sketches illustrating typical electrocardiographic patterns associated with acute anterior infarction of the left ventricle, healing acute anterior and posterior infarction, acute posterior infarction of the left ventricle, chronic left ventricular strain, acute right ventricular strain, acute septic pericarditis, and chronic constrictive pericarditis. The illustrative drawings are distributed through the chapters devoted to a discussion of these conditions. In addition to these, there are chapters on the coronary circulation, the effect of various drugs and metabolic disorders on the electrocardiogram, and finally a general discussion of the fourth lead.

The subject matter has been developed by the use of actual electrocardiograms and case histories. The abundance of this well arranged material makes it an authoritative reference book; the author's simple, forceful style in writing makes it easy and interesting reading for the student of electrocardiography.

Unfortunately the book was published soon after the International Committee for Standardization of the fourth lead (of which the author was a member) recommended the use of Lead IV F. The illustrative electrocardiograms were all made by the older technique and therefore show the complexes inverted as compared to the now generally used IV F. records. By means of a little mental gymnastics, the translation can easily be made, but it is to be hoped that the fourth lead illustrations can be changed without the loss of the excellent material represented by the old records.

[3]**The Newer Nutrition in Pediatric Practice.** By I. Newton Kugelmass, B. S., M. A., M. D., Ph. D., Sc. D. Attending Pediatrician, Broad Street Hospital and Heckscher Institute, New York; Consulting Pediatrician, Lynn Memorial Hospital, Monmouth Memorial Hospital and Muhlenberg Hospital, New Jersey. Cloth, 1094 pages, with 183 illustrations. Price, $10.00. J. B. Lippincott Company, Philadelphia, 1940.

The writer's declared purpose in writing this rather monumental work "is to apply the newer knowledge of nutrition to every day practice in pediatrics." Even a cursory perusal of the book reveals that he has done this and more. His very evident consistent effort for thoroughness, and attention to detail has brought into this treatise all pertinent basic chemical, physiologic and pathologic information, together with a vast amount of very sound clinical knowledge covering every phase of etiology, diagnosis, and technique of treatment.

There are fifteen major sections in the book, logically and coherently arranged, each of which is worthy of note.

Number one consists of a brief but very informative consideration of maintenance and metabolism, setting forth important facts as to the nutritional basis of growth and energy metabolism. Number two is a continuation of the same subject dealing particularly with the metabolism of protein, carbohydrate, and fat. Number three continues into a very up-to-date exposition of the vitamin factors, and number four covers the subject of the inorganic nutrients in the same manner. Number five briefly considers the physiology of gastro-intestinal digestion.

Parts six to nine, inclusive, cover the subject of nutrition of the normal child from birth to adolescence in a most able and thorough manner, but not, however, with boresome pedantry. On the contrary every important phase is handled in a very lucid and practical manner. Charts, tables, and dietary forms of definite every day value in pediatric practice are numerous.

[3]Reviewed by David Greer, M. D., Houston, Texas.

The last sixteen sections, which comprise the major portion of the work (680 pages) are confined to nutrition in disease dealing separately with diseases of digestion, deficiencies, metabolism, allergy, infection, and anatomical regions of the body.

The last sections are absolutely unique as far as American pediatric publications on nutrition up to this time are concerned. Though very fine diet and nutritional tables and charts are abundant throughout, they are overshadowed by the excellence of the text in its concise presentation of etiologic and diagnostic features which form the basis for their application.

Any one dealing with both well and sick children, be he general practitioner or pediatrist, can ill afford to be without this veritable storehouse of up-to-date practical information.

[4]**Biochemistry of Disease.** By Meyer Bodansky, Ph. D., M. D. Director of the John Sealy Memorial Laboratory and Professor of Pathological Chemistry, University of Texas School of Medicine and Oscar Bodansky, Ph. D., M. D. Lecturer in Biochemistry, Graduate Division, Bellevue Hospital, and Instructor, Department of Pediatrics, New York University, College of Medicine. Cloth, 637 pages. Price, $8.00. The Macmillan Company, New York, 1940.

It was the reviewer's privilege to see most of the galley proof of this medical monograph by the two Bodanskys, Meyer, of the University of Texas School of Medicine, and his brother, Oscar, of the Graduate Division of Brooklyn College, New York City. This preview was permitted by the senior author, because the reviewer was in need of some biochemical data and knew of the preparation of this book. Incidentally, this work was selected for the Medical Monograph series by Dr. George Minot, advisory editor.

Medical science is evolving so rapidly that the average book pertaining to medicine is almost antiquated before it leaves the publisher. Frequent revisions are necessary in order to incorporate the fast changing concepts of disease, newer diagnostic methods and particularly the newer trends in therapeutics. Basic treatises on anatomy, pathology, physiology, and biochemistry rarely need such frequent revision. Thus, in Biochemistry of Disease, we clinicians are provided with a reference that may remain on our desks as fresh and informative tomorrow as it is today.

Until the appearance of this valuable work, the inquiring clinician found it necessary to thumb the pages of some several books before finding the answers to his inquiries. From no other one source can one get information, clinical and biochemical, more thoroughly correlated than in this book. The writing of such a monograph must have been a formidable undertaking.

The book is just what its title implies—"a systematic presentation of the biochemical aspects of the various diseases, arranged according to clinical entities." It is obviously impossible to review such a volume in the ordinary sense of a review. The authors begin their presentations with a most enlightening discussion of blood and the blood dyscrasias, emphasizing as would be expected, the biochemical aspects. Next are considered the diseases of the heart, respiratory, and genito-urinary systems. It is interesting to the reviewer that the authors very cleverly change the title of the next two chapters to *disorders* of the gastro-intestinal tract, liver and biliary tract. Then are taken up in order diseases of the pancreatic, adrenal, pituitary, thyroid and parathyroid glands. The most recent endocrinological concepts are incorporated and correlated with

[4]Reviewed by J. Shirley Sweeney, M. D., Dallas, Texas.

the biochemical implications. Next are considered diseases of the bone and muscles.

It is true that the authors have given considerable space to relatively uncommon conditions, in comparison to more common ones, but they take license for this disparity in their preface. The reason for this apparent unnecessary, though justifiable emphasis, is that much new biochemical data are included that otherwise might have been omitted, or referred to only briefly.

Next, consideration is given from the biochemical viewpoint to the field of obstetrics and gynecology. After two chapters on miscellaneous disorders of nutrition and metabolism, in which are picked up the loose ends that may not have been included in the previous chapters, the authors present a final chapter on the biochemical aspects of neurologic and psychiatric disturbances.

From purely an internist's viewpoint, after a careful perusal of this excellent work, the reviewer could find but few places where he thought a little more comprehensive discussion might have been in order. But after all, the book was not designed to have encyclopedic proportions, and it is a presentation of the *biochemistry* of disease.

There is an unusually good index. The authors have appended to each chapter quite an extensive bibliography and in addition have prepared an index to the writers whose material has been referred to in the text.

Summarily, this addition to our library (and it should be an addition to every medical man's library) is most welcome. The reviewer, with sincerest convictions, recommends this book to every doctor irrespective of the field of medicine in which he may be interested.

DEATHS

Dr. Leslie Eugene Kelton of Corsicana, died June 19, 1940, at his home, of coronary occlusion.

Dr. Kelton was born October 17, 1869, in Manchester, Tennessee, the son of James P. and Annette Carnes Kelton. He came to Texas at the age of 16 and resided in Irene, Hill County, Texas, later moving to Corsicana in 1893. His academic education was received in the Texas State Normal College, Huntsville, Texas, and Vanderbilt University, Nashville, Tennessee. He had taught school prior to beginning the study of medicine in the medical department of the University of the South, from which institution he was graduated in 1897. He had practiced at Powell, Texas, for two years and at Corsicana for forty-three years.

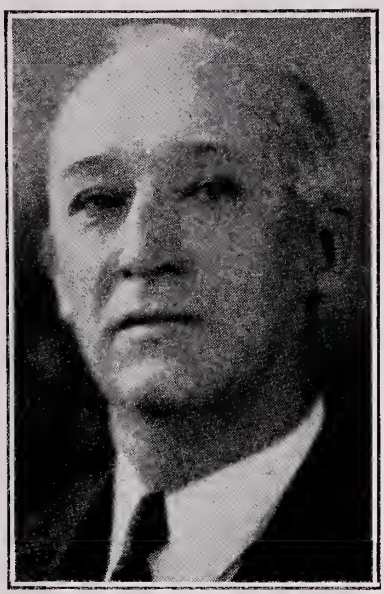
Dr. Kelton was a member continuously in good standing throughout his profesisonal career of the Navarro County Medical Society, Central Texas District Medical Society, State Medical Association and American Medical Association. He was a member of the Committee on Memorial Exercises for the 1940 annual session of the State Association. He was a member of the Christian Church and a charter member of the Corsicana Lions Club. During his professional career Dr. Kelton had taken postgraduate work at Tulane University, New Orleans, and at Chicago and New York. He had enjoyed an extensive practice, especially of obstetrics. For several years he was the attending physician to the Texas State Orphans Home at Corsicana.

Dr. Kelton was a writer of short stories and poetry. He was a lover of nature, and an authority on farming and stock raising. His loss will be keenly felt by his community.

Dr. Kelton is survived by his wife, the former Miss Emma Gray, to whom he was married August 29, 1894 in Corsicana, Texas. He is also survived by three sons, Dr. Leslie E. Kelton and David C. Kelton, Corsicana, and Phil L. Kelton, Dallas; one daughter, Elizabeth Kelton, Corsicana; four brothers, Dr. Walter Kelton, Seattle, Washington; H. A. Kelton and W. W. Kelton, San Antonio, and Alva L. Kelton, Austin; and two sisters, Mrs. Jack Shelby, Austin, and Mrs. Charles Erickson, Seattle, Washington.

Dr. Charles Pierce Cook died at his home in Ennis, Texas, June 14, 1940, of coronary occlusion and cerebral embolism.

Dr. Cook was born October 1, 1871, in Potts Camp, Mississippi, the son of John J. and Mary Griffin Cook. His preliminary education was received in the schools of Potts Camp and his medical education was obtained from the Memphis Medical College, Memphis, Tennessee, from which he was graduated in 1895. Following his graduation he began the practice of medicine at Bardwell, Texas, where he remained until 1903. He then moved to Ennis, where he had lived and practiced for the remainder of his professional life.



DR. C. P. COOK

Dr. Cook was a member of the Ellis County Medical Society, State Medical Association and American Medical Association for many years. He was a member of the American Railway Surgeons Association and a member and past president of a local club of physicians and dentists at Ennis. In 1905 he was appointed local surgeon for the Southern Pacific Railway and in 1908 became division surgeon in charge of the hospital at Ennis. He had been a constant student of medicine throughout his professional life and in late years had taken postgraduate work in Tulane University Medical College, New Orleans, in Chicago, and in New York City.

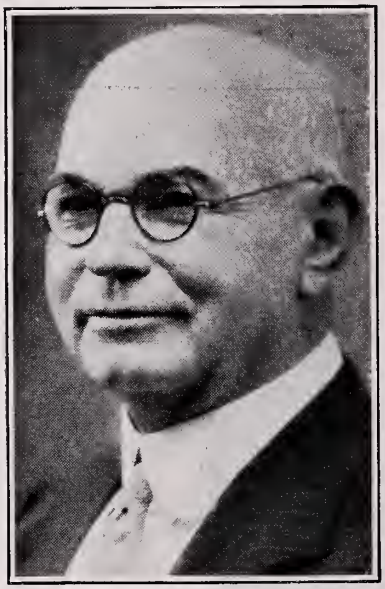
In 1917, Dr. Cook was commissioned a Captain in the Medical Corps of the U. S. Army, being stationed first at Fort Oglethorpe, Georgia, and later at the Gas Defense Hospital on Long Island for the duration of the World War. Dr. Cook was an active member of the Baptist Church. He was actively identified with the civic and commercial growth of Ennis, and was a director in the Ennis State Bank. He will be genuinely missed by his community as a capable practitioner and a civic, religious and social leader.

Dr. Cook is survived by his wife, the former Miss Pearl Sanderson to whom he was married May 8, 1898, at Bardwell, Texas. He is also survived by a son, Charles S. Cook, Ennis; a brother, George J. Cook, and a sister, Mrs. Minnie Wilson, both of Potts Camp, Mississippi.

Dr. Ralph S. Jackson of San Antonio, died June 25, 1940, in a San Antonio hospital, after an illness of many years.

Dr. Jackson was born in Double Bayou, Chambers

County, Texas, January 18, 1870, the son of Judge James and Sarah White Jackson, pioneer Texans. He obtained his medical education in the medical department of the University of Texas from which he was graduated May 12, 1900. He had lived and practiced in San Antonio for twenty-nine years.



DR. RALPH S. JACKSON

Dr. Jackson was a member of the Bexar County Medical Society, State Medical Association and American Medical Association in 1908 and from 1915 until the time of his death. He was elected an honorary member of the State Association in 1940. He was a member of the Presbyterian Church, a life member of the Masonic order, and a member of the Scottish Rite and the Shrine. He was also a member of the Texas State Pioneer Association.

Quiet and retiring in disposition, he was one of the most highly esteemed members of the Bexar County Medical Society.

Dr. Jackson is survived by his wife; a daughter, Mrs. J. T. White, Stowell, Texas; a sister, Mrs. A. L. Mayes, San Antonio, Texas; and three brothers, J. E. Jackson and Guy C. Jackson, San Antonio, and Claude Jackson, Double Bayou, Texas.

Dr. Joseph Pink Harris of Midlothian, Texas, died May 18, 1940, in a Waxahachie hospital, of injuries received in an automobile accident, May 4, 1940.

Dr. Harris was born September 15, 1882, at Italy, Texas, the son of J. P. and Lucy Harris. His preliminary education was received at Hillsboro High School and Johnson's College, Ardmore, Oklahoma. His medical education was obtained from Tulane University Medical School, New Orleans, from which he was graduated in 1906. He began the practice of medicine at Mountain Peak, Texas, where he remained for eight years. He then removed to Midlothian, Texas, where he lived and practiced the remainder of his professional life.

Dr. Harris had been a member of the State Medical Association and American Medical Association continuously in good standing through the Ellis County Medical Society from 1913 until his death. He served his county medical society as president in 1932. He was a First Lieutenant in the Medical Corps of the U. S. Army during the World War, being stationed at Camp Logan, Houston, Texas. Dr. Harris was a Royal Arch Mason, Knights Templar and a member of the Shrine. He was a member of the First Presbyterian Church, which he had served as an elder for twenty-five years. His untimely death was a distinct loss to his community.

Dr. Harris is survived by his wife, the former Miss Eva Spears of Mountain Peak, to whom he was married November 17, 1908. He is also survived by one son, Dr. Joe B. Harris, now serving an internship in the St. Louis City Hospital; two half-brothers, Will Bowen, Denver, Colorado, and Fred Bowen, Dallas, Texas; and two half-sisters, Mrs. Earl Lee, Gladewater, Texas, and Mrs. T. Taylor, Lampasas, Texas.

Dr. R. W. Noble of Temple, Texas, died June 20, 1940, at his home, of coronary thrombosis.

Dr. Noble was born November 21, 1863, near San Marcos, Texas, the son of Moses G. and Cornelia Woods Noble, natives of Virginia, who were pioneer settlers in this state. Dr. Noble received his preliminary education in the public schools and in Hills Business College in Waco. He began the study of medicine by the preceptor method under the late Dr. C. P. Hamilton, an early Texas physician and surgeon. Dr. Noble began the practice of medicine in Barclay, Falls County, where he remained for two years. He then entered the Memphis Hospital Medical College, Memphis, Tennessee, from which he was graduated in 1887. He then returned to Barclay, Texas, where he practiced until 1895, at which time he moved to Temple, which was his home for the remainder of his professional life.

DR. R. W. NOBLE

Dr. Noble was a member of the Bell County Medical Society, State Medical Association and American Medical Association for many years. He was a past president of the Bell County Medical Society. He had served the city of Temple as health officer early in his medical career and had again served in that capacity the last two years of his life. As health officer early in his professional life he had an active part in securing for Temple its first water filtration plant and sewage disposal system. Dr. Noble had also served as a member of the Texas State Board of Health for several years. In 1898, he participated in the founding of the King's Daughters Hospital at Temple and had served as a member of its staff for the remainder of his life. He had specialized in bone surgery, in which specialty his skill and ability was widely recognized. He was a fellow of the American College of Surgeons. For many years he was an active member of the Temple Lions Club. Dr. Noble's hobby was writing. He was the author of several books, poems, short stories, and scenarios. He was an authority on Biblical stories and early Texas history. Dr. Noble was also a superb story teller and a natural artist. His death marks the passing of a benevolent and capable public servant, both as a physician and surgeon and as a citizen. His life was rich in achievement. He will be greatly missed.

Dr. Noble is survived by his wife, formerly Miss Eunic Little of Temple, to whom he was married December 18, 1889. He is also survived by two

daughters, Mrs. A. V. Thebo, Monroe, Louisiana, and Mrs. H. Tweedy, Houston; one son, Perry A. Noble, St. Louis, Missouri, and a brother, Alf E. Noble, Waco.

Dr. Summerfield M. Taylor of Austin, Texas, died May 27, 1940, at his home, of coronary occlusion.

Dr. Taylor was born May 11, 1889, in Batesville, Virginia, the son of Dean and Mrs. Thomas Ulvan Taylor. His academic education was received in the Ford Academy, Whitis School, Allen Academy, and the University of Texas at Austin. His medical education was obtained in the medical department of the University of Texas from which he was graduated in 1913. He served an internship in St. Mary's Infirmary, Galveston, in the year 1913-1914. He then attended the Naval Medical School at Washington, D. C., from 1914 to 1915, following which he was stationed at the United States Naval Hospital at Olangapo, Philippine Islands, from 1915 to 1917. He was later stationed in naval hospitals in Charleston, South Carolina, and in the Canal Zone. In 1921, Dr. Taylor resigned from the Navy with the rank of Lieutenant Commander. In 1923, he located in Austin, Texas, where he had been in the active practice of the specialty of eye, ear, nose and throat until his death.

DR. SUMMERFIELD M. TAYLOR

Dr. Taylor was a member for several years of the Travis County Medical Society, State Medical Association and American Medical Association. He held a certificate from the American Board of Otolaryngology and was a fellow of the American College of Surgeons. He was otologist for the Texas School for the Deaf at Austin, and was a member of the staffs of St. David's Hospital, Seton Infirmary and Breckenridge Hospital, Austin. He was a member of Kappa Sigma academic fraternity and the Phi Alpha Sigma medical fraternity. He was a member of the Episcopal Church. Dr. Taylor was held in high esteem by his medical associates.

He is survived by his wife, formerly Miss Florence Davis Riner, to whom he was married April 14, 1916, in Olangapo, Philippine Islands. He is also survived by two sons, Thomas Ulvan Taylor II and Summerfield M. Taylor, Jr., of Austin; one sister, Mrs. D. C. Stroether, Randolph Field, Texas, and his parents, Dean and Mrs. T. U. Taylor, Austin.

Dr. John R. Sledge of Stamford, Texas, died June 16, 1940, at his home, of pneumonia.

Dr. Sledge was born August 31, 1855, in Macon, Georgia, the son of John B. and Marietta Heath Sledge. His preliminary education was received in the schools of Macon, Georgia. His medical education was obtained in a medical college in Macon, Georgia, from which he was graduated in 1876. After his graduation he served internships in hospitals in Atlanta, Georgia and Louisville, Kentucky. He began the practice of medicine in Alabama, where he remained six years. He then removed to Texas, locating at Dublin. In 1890 he was compelled to move to California on account of his health but returned to Texas in 1893, practicing at Comanche until 1900. He then removed to Stamford, a town founded in 1899, which was his home for the remainder of his life. He saw Stamford grow from a community of tents, located in a mass of mesquite trees surrounded by woods and prairies filled with buffalo and wild game to its present status.

Dr. Sledge was a member of the State Medical Association and American Medical Association for several years through the Jones County Medical Society. During his professional career he had taken extensive postgraduate work in New York. He was a registered pharmacist in both the states of California and Texas. Apart from his profession he had been active in the civic life of his community, having served as mayor of Stamford and alderman and chief of its fire department. He also served the city of Stamford as health officer for three terms. He was also an active member of the Episcopal Church and a member of the Knights of Pythias and Odd Fellows fraternal organizations. For a number of years he was a member of the Jersey Cattle Club.

Dr. Sledge is survived by his wife; one daughter, Mrs. C. R. Penick, Greenburg, Kentucky, and two sons, John B. Sledge, Los Angeles, California, and Charles B. Sledge, Stamford.

Dr. John Harolde Turner of Houston, Texas, died suddenly June 5, 1940, of coronary occlusion.

Dr. Turner was born October 18, 1894, in Bonney, Brazoria County, Texas, the son of Frank W. and Annie Dorothy Krause Turner. His academic education was received in the public schools and the Sam Houston State Teachers College at Huntsville. His medical education was received in the medical department of the University of Texas, from which he was graduated in 1919. He then served as Junior and Senior house surgeon at St. Vincent's Hospital, New York City, from July, 1919, to July, 1921, following which he was assistant resident in urology in the Johns Hopkins Hospital, Baltimore, from 1921 to 1922. He then located in Houston, Texas, in association with his brother, Dr. B. Weems Turner, where he had practiced his specialty until his death.

DR. JOHN HAROLDE TURNER

Dr. Turner was a member of the Harris County Medical Society, State Medical Association and American Medical Association continuously in good standing throughout his years of practice. He was vice-president of the Harris County Medical Society

at the time of his death. He had served the Harris County Medical Society as delegate to State Medical Association meetings for several terms. During the last two annual sessions he had served as chairman of the reference committee on reports of officers and committees, an important office. He was one of the organizers of the South Texas Postgraduate Medical Assembly, which he served as president in 1937. He was a member of the Texas Surgical Society, the American Urological Association, the South Central Section of the American Urological Association, and the Southern Medical Association. He had been a fellow of the American College of Surgeons since 1926 and was certified by the American Board of Urology in 1936. Dr. Turner was a member of the medical corps of the United States Naval Reserve at the time of his death, holding the rank of Lieutenant Commander. He was a member of the Alpha Kappa Kappa medical fraternity and a member of the Episcopal Church, which latter institution he was serving as vestryman at the time of his death. He was a member of the River Oaks Country Club, Houston.

Dr. Turner was an accomplished urologist, held in the highest esteem by his medical confreres. He was an original and constructive thinker and had willingly accepted the responsibility of leadership imposed on him by his medical associates. His untimely death cuts short a life of promised great usefulness in the practice of his profession and in the objectives for which organized medicine is working. Possessed of a genial and lovable disposition he had a host of friends throughout the State.

Dr. Turner is survived by his wife, formerly Miss Carrie McMickin Johnson of Richmond, Texas, to whom he was married October 6, 1923. He is also survived by a daughter, Nancy Claire; a sister, Mrs. A. L. Moller, Alta Loma, Texas; two brothers, Dr. B. Weems Turner, Houston, and Frank W. Turner, Jr., Angleton, and his parents, Mr. and Mrs. F. W. Turner, Turner Ranch, Bonney, Brazoria County.

Dr. Robert Lee La Rue of Eustace, Texas, died March 20, 1940, at his home, of pneumonia.

Dr. La Rue was born January 21, 1870 in Athens, Texas, the son of Jack and Adline La Rue. His preliminary education was received in the public schools of Henderson County and his medical education was obtained from the Memphis Hospital Medical College, Tennessee, from which he was graduated in 1909. He had taken postgraduate work in Tulane University, New Orleans, during his medical career. Dr. La Rue began the practice of medicine at Athens, Texas. He had practiced at Nacogdoches and Aransas Pass prior to his final location in Eustace, where he had lived and practiced for several years. He was an ethical and highly respected physician, and his passing is a loss to his community.

Dr. La Rue was a member for several years of the State Medical Association and American Medical Association through the Henderson County Medical Society and San Patricio-Aransas-Refugio Counties Medical Society. He was a member of the Christian Church.

Dr. La Rue is survived by his wife, the former Miss Lulu Delia Walker, to whom he was married September 1, 1895. He is also survived by six daughters, Miss Marie La Rue, Fort Worth; Miss Ruth La Rue, Plainview; Miss Jack La Rue, Iowa Park; Mrs. J. A. Allison, Austin; and Mrs. T. J. Burr, Houston, and three sons, M. H. La Rue, Houston; S. O. La Rue, Corpus Christi, and N. La Rue, Eustace.

Dr. Robert Lee Yeager of Mineral Wells, Texas, died June 19, 1940, at his home, of pyelonephritis, after an extended illness.

Dr. Yeager was born in Tarrant County, Texas, November 7, 1872, the son of Dr. C. F. Yeager and Sue L. Akard Yeager. He moved to Mineral Wells with his parents in 1881, the year that city was founded. His father was one of Mineral Wells' first physicians. His preliminary education was received in the schools of Mineral Wells, and he was graduated with an academic degree in 1895 from Vanderbilt University. He returned to Mineral Wells and taught Latin, Greek and German for two years in the Mineral Wells College, prior to beginning the study of medicine. His medical education was obtained in the University of Texas School of Medicine from which he was graduated in 1898. He served an internship in John Sealy Hospital, Galveston, until his appointment to the Public Health Service, Galveston, during a smallpox epidemic in 1898. He returned to Mineral Wells in 1899, where he lived and practiced for the remainder of his professional life.

DR. R. L. YEAGER

Dr. Yeager was a member continuously in good standing of the State Medical Association and American Medical Association from 1916 until his death with the exception of one year, through the Palo Pinto County Medical Society and the Palo Pinto-Parker Counties Medical Society after its organization in 1938. He had held all offices in his local society. His specialty was radiology. He was a member of the American Radiological Association, and radiologist for the Nazareth Hospital, Mineral Wells. He had formerly served this institution as chief of the medical staff. He had served from 1910 to 1915 as district examiner for the State Board of Pharmacy. Dr. Yeager was a member of the Methodist Church. He was a thirty-second degree Mason, a Shriner, and a member of the Rotary Club. He was a member of the Alpha Tau Omega fraternity.

Dr. Yeager was a deep student not only of medicine but of a wide variety of subjects. His high ideals, unfailing courtesy and unswerving loyalty to service in his profession had gained for him the universal admiration, respect and love of his community.

Dr. Yeager is survived by his wife, formerly Miss Bessie Birdwell, to whom he was married in Mineral Wells in 1899. He is also survived by two daughters, Mrs. Robert Owen Barnes, Dallas, and Mrs. Jack Austin, Little Rock; a son, Dr. Robert L. Yeager, Trudeau, New York; a brother, Ben A. Yeager, Mineral Wells; a step-mother, Mrs. C. F. Yeager, Mineral Wells; three half-brothers, Dr. Edward F. Yeager and Cornelius Yeager, Mineral Wells and Abraham Yeager, Fort Worth; and four sisters, Mrs. Mike Costello, Pickwick; Mrs. Howard Stoker and Mrs. John Fussell, McCamey, and Mrs. Clyde Bullion, Truscott.

Texas State Journal of Medicine

EDITORIAL OFFICES: 1404 W. El Paso Street, Fort Worth, Texas
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Vol. XXXVI **September, 1940** **No. 5**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

Medical Preparedness Lagging in Texas.— We are informed that questionnaires recently sent to the medical profession of this country, in an effort to classify, tabulate and in general get the medical profession ready for service in the case of a national war emergency, have been coming in quite satisfactorily so far as the country as a whole is concerned, but not so satisfactorily so far as Texas is concerned. On August 30, 91,350 questionnaires had been returned to the American Medical Association at Chicago. That is 51 per cent of the questionnaires mailed. It appears that the highest percentage of returns from any state was from Nebraska, with a score of 81.4. The lowest percentage of returns was 38.1. The returns from Texas were 42.3, well below the average, it will be noted; indeed, it is exactly sixth above the lowest percentage of returns. There are 6,932 licensed physicians practicing medicine in Texas. More than 4,000 of these have failed to answer the questions propounded to them in this connection.

It seems rather strange that any physician would fail to do his part under these circumstances. We are sure that the failure is not incident to any lack of patriotism. Such a thing would be unthinkable. Doubtless there are unpatriotic physicians, even selfish physicians, but no doubt the answer is pure and unadulterated carelessness, or lack of appreciation of the importance of the thing. Of course, there are those who feel that they are not available for military service, anyway, and for that reason should not be bothered about it.

The truth of the whole situation is, it is highly important, regardless of any patriotic impulses we may have or may lack, that we be individually listed and tabulated as to the sort of service we can render, and would like to render in the emergency confronting us. In the last war doctors were distributed indiscriminately through all of the branches of the service, and with equal lack of discrimination distributed to the civilian population. As a result, there were many misfits and inadequacies, most of which could have been adjusted with a little more time and a little more forethought. An effort is now being made to make the adjustment in advance of the need of it. In other words, we want to practice what we preach—prophylaxis.

Our obligations as a profession are fourfold. First, we must supply the necessary medical service for our armed forces. Second, we must continue to render adequate service to the civilian population. Third, we must maintain our very fine public health service, and fourth, we must provide a specialized service in connection with the enormous industrial expansion about to take place in belatedly providing for the necessary equipment for a large, modern army.

We certainly, therefore, should know where the physicians reside who are of suitable age for service with our armed forces, and who are willing to serve in such capacity. It is equally advisable that we know who are not suited to such an active and strenuous service, that they may be assigned to duties with the civil population. We should also be in a position to protect our public health

service against depletion in personnel certain to follow unlimited and undirected draft on the medical profession for officers for the Army. There will be those among our health officers who would prefer serving with the armed forces, of course. The only way to find that out is to make inquiries of them. There are physicians physically fit for public health service who would hardly be considered as entirely fit for field service in the Army, or service at sea with the Navy or Marine Corps. These could be placed under less exacting classifications. As in the case of the several well known and well established specialists, all of which should be classified and placed where they belong in the set-up, the industrial surgeon, so-called, should be identified and located, and preferably assigned to serve in connection with our all important industrial activities. On the whole, therefore, it seems to us that there is every reason why each doctor should be classified, and the only way to give any doctor his classification is to find out from him what he thinks he can do, and what he prefers doing. That is the questionnaire.

The time is fast approaching when county medical societies will need to get busy in this connection. There should be a committee from each county medical society, and a high-powered committee at that, to first see to it that each physician within the jurisdiction of its county medical society promptly supplies the information called for upon the much-discussed questionnaire, and then do a little classifying on its own. Eventually the data that are now being assembled by the American Medical Association, and about which we are talking, will be broken down by states and by counties. There must be a central agency in each group for making decisions. The State Medical Association already has a Committee on Military Affairs, which committee will take care of the situation so far as the State as a whole is concerned. There should be a similar committee in each county medical society. As we have said, this committee must be a good one. Its duties will be exacting and highly important. It should be made up of those members who are not likely to be called for duty away from home.

It is planned at present to set up draft boards throughout the country, immediately that the pending bill providing for compulsory military training passes. Indeed, most of the states have already set up such boards, for service if and when the selective service bill becomes a law. There must be one or more physicians connected with each such board, to make the necessary preliminary physical examinations. Incidentally, so we are informed, these physicians will be paid for their services. There is to be a board of physicians for each Senatorial District, in each State, to which board draftees may appeal from the decisions of local boards as to their physical condition. It would seem that advice as to the personnel of such groups would best come from the medical profession as an organization, rather than as individuals. Such request has been made of state medical associations in several of the states, to our knowledge. And, incidentally, the State Medical Association of Texas has offered our Governor its coöperation in the matter. We have not been advised as to whether our cooperation will be acceptable.

In short, the medical profession is on the spot. As before, we must do our part. It is true that there is no war, but certainly there is grave danger of war. It is likewise true that the physician who leaves his home and his practice for military training, either with the National Guard, the Reserve, or draftees, will be called for a limited time, and in the meantime he will not be adequately compensated, a sacrifice he may not deem justifiable outside of war times; but it must be remembered that even though we are not at war, we are as seriously menaced as we would be were we at war, and the only safe way to look at it is that we are potentially at war, and that any sacrifice we may be called upon to make in connection with preparedness is justified under the existing conditions.

Any physician in Texas who has lost or misplaced his questionnaire can secure another one by applying to the American Medical Association, 535 North Dearborn Street, Chicago, Illinois, or to the central office of the State Medical Association, at 1404 West El Paso Street, Fort Worth, Texas.

Those of our members who are interested in entering the Army at once, in any capacity, should address either Major General Herbert J. Brees, Eighth Corps Area, Fort Sam Houston, San Antonio, Texas, or Colonel W. Lee Hart, M. C., U. S. A., Corps Area Surgeon, at the same address.

Any who may be interested in immediate medical service in the Navy, should address Captain Thomas W. Raison, M. C., U. S. N., Charleston, South Carolina.

Vital Statistics a National Defense Necessity.—We are very much afraid that neither the medical profession nor our people generally, realize the importance of adequate birth registration as it relates to national defense, a problem causing much uneasiness at the moment. We have been in the habit of looking upon vital statistics as the bookkeeping of public health, a necessity, yes, but, after all, a problem of health officials and not so much our own. We forget that the State Medical

Association of Texas once made entrance into the registration area of the Bureau of Census a prime objective. There was no rest among our friends in the Legislature until what was believed to be a practical and effective vital statistics law was passed. We had long been, to our embarrassment and chagrin, the only state in the Union which had not been accepted by the Bureau of Census. Our birth and death certificates had been entirely inadequate and unreliable for any such dependence.

Apparently we have felt that the practicing physician, after all, should not be bothered about it; certainly unless he were paid, and paid well for his services. We forget that at the time we secured a much sought revision of our vital statistics law we pledged ourselves to do our part, in the realization that, after all, the practice of medicine is a privilege and not a right, a statement which has been recently proven in the courts, and that in return for the extension of this privilege the doctor is glad to render such small service as that involved. True, some of the requirements of the present birth certificate, to mention only that, are aggravating, and apparently without necessity in connection with the vital statistics problem, but that is an incidental matter, and as for that, one which has its ramifications. As a matter of fact, the birth registration blank calls for information which the doctor can give at the time more conveniently than he can later on, when he will quite likely be called upon to do something about it. It would appear, after all, that we are not being imposed upon in this connection.

Briefly, and while we are on this phase of the problem, the law requires either the justice of the peace or the city clerk, to secure records of every birth and every death. Bodies may not be interred until a death certificate has been filed. Birth certificates must be filed within five days of birth. The physician must file such a certificate, if there was a physician in attendance. The county attorney is required to initiate proceedings where the requirement of the law has not been complied with.

A recent amendment to the law provides a way for legally filing a record of a previously unregistered birth, which provision has very definitely met an important need. Indeed, so great has become the rush in filing old-date certificates, that the vital statistics bureau has not been able to anything like keep up with the work.

All along, the bureau of vital statistics has been called upon for copies of certificates to meet a great variety of requirements, many of them most important, indeed. For instance, the veterans of our recent war must file birth certificates in order to substantiate their claims for compensation. Very frequently these veterans find it difficult to find copies of birth certificates, for the reason that there were no certificates of birth filed, or the certificates filed were so faulty that they are not useful in this connection. Birth certificates are required for entrance into schools, for widows and orphans pensions, to establish citizenship in connection with passports, and to support deductions on income tax because of dependents. Now comes the war emergency, and an increase by leaps and bounds of the demand for copies of birth certificates. They are necessary upon entering military service, and necessary in connection with some of the occupations in connection with rearmament. Of even greater importance, is the need of such certificates in order to get at foreign agents and suspects in so-called fifth column activities.

During the year 1939, resorting to statistics in this connection, which was before the war emergency became such, more than 30,000 requests were filed with the State Bureau of Vital Statistics. The fact that only 14,261 of such certificates could be furnished, because of faulty records, is not to the point, even though worthy of comment. The amount of trouble to the people, and to the officials of the Vital Statistics Bureau, in this connection, can hardly be estimated. So great has become the congestion at this most important point, that we have felt called upon to make some investigations. We find that the Bureau is ridiculously overloaded with work, due apparently to the necessity of establishing citizenship, as required by the national defense program. Unfortunately, the Bureau has not only not had additional help to meet this emergency, but because of a depleted appropriation for the Department, ten clerks were recently discharged. To take just one day, August 26, 1940, we find that there were on hand that day, 1,477 unanswered requests for copies of birth certificates. There were on hand at that time, to be tabulated and filed, 1,181 old-date birth certificates. There were 3,031 delayed records to be indexed, and 12,062 corrections to be written and mailed, not to mention 66,213 birth and death certificates to be punched and tabulated. For the moment, all effort to supply recent mothers with certificates of birth have been stopped.

We mention these accumulations of work, not in complaint of either the bureau or those who saw fit to restrict the appropriation for the bureau, but in order to emphasize the importance of sufficient clerical help for the bureau. We appreciate fully that we cannot

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COLLEGE OF PHYSICIANS

do much about it at this time; that it is a matter for consideration by governmental authorities, instead, and that about all we can do is to assure these same governmental authorities that we will be highly appreciative of any corrective action they can take in the matter. The reason we are appreciative is because, as we have already said, we have agreed to in a measure underwrite our vital statistics enterprise, partly in discharge of our obligation to the State for the privilege of practicing medicine.

In closing the discussion, we may call the attention of our readers to the "Physicans' Handbook on Birth and Death Registrations," a most helpful, and, indeed, necessary publication so far as vital statistics are concerned. These are available to physicians individually upon application to the Bureau of the Census at Washington, or the State Health Department at Austin. County medical societies may obtain supplies for their members upon application to either of these agencies of the government. The pamphlet is conveniently arranged to fit the pocket of the physician. It contains full information concerning the whole problem of vital statistics, with an appendix giving the so-called "International List of Causes of Death," which is a glossary of terms commonly used in vital statistics. Nearly all of the information contained in this handbook will be needed at one time or another by the physician who is in active practice.

Lest We Forget—Cancer.—The Committee on Cancer of the State Medical Association has joined with the American Society for the Control of Cancer, and the Women's Field Army, an adjunct of the Federated Women's Clubs of Texas, in a determined effort to bring the truth about cancer to the people of Texas. Mrs. Volney W. Taylor of Brownsville, a past-president of the Federated Women's Clubs of Texas, is Commander of the Women's Field Army of Texas. She is well supplied with captains, lieutenants, and other helpers, and is very busy, successfully so, it seems, in bringing the problem to the attention of the public in general and the women in particular. We are advised that Mrs. Taylor has succeeded in organizing for this service more than 100 counties in the State. She is in need of speakers for public meetings, luncheon clubs, and other organizations. Our Committee on Cancer is coöperating with this group, but there is more needed than that. County medical societies, and even local groups of physicians within county medical societies, could render a real service by coöperating in this particular movement.

It will be remembered that this work is purely educational. It is right down the alley of the medical profession. There is no chance for getting involved in any problems leading to socialized medicine. The Woman's Auxiliary of the State Medical Association could well afford to coöperate, and doubtless will do so if given the opportunity. We expect our Committee on Cancer to attend to that. We mention the matter at this time and in this manner, for the reason that we have for some time neglected to say anything about cancer, and for the further reason that the medical exigencies of recent times have tended to crowd out such important considerations as this.

We are advised by Dr. J. M. Martin of Dallas, chairman of our Committee on Cancer, that the American Society for the Control of Cancer has produced a very fine sound picture concerning cancer, designed for the layman. It goes under the title, "Choose to Live." It is 800 feet in length. The lecture which accompanies the film is pleasing, not at all shocking, and is always well received. This film may be had upon proper request, at a very nominal cost; in fact, just what it costs to ship the same, properly insured, we presume. Dr. Martin owns a copy of this film, and will supply the same under adequate safeguard and control. Those who are interested might well correspond with Dr. Martin with regard to the matter, or, we are sure, with any member of the Cancer Committee. Other members of this committee are Drs. Dudley Jackson, San Antonio; Sidney J. Wilson, Fort Worth; M. E. Lott, Dallas; A. A. Ross, Jr., Lockhart.

We are advised, also, that the American Society for the Control of Cancer (350 Madison Avenue, New York City) has considerable literature which it will be glad to furnish physicians, without cost, upon requisition.

The following is a list of the items concerned:

No. 40—*Cancer of the Breast* by Arthur H. Estabrook, Ph. D.—an eight-page reprint from the "Trained Nurse and Hospital Review" Jan., 1939, with photographs showing steps in the radical surgical operation for breast cancer.

Re. 1.—*Biopsy in Mammary Cancer* by James Ewing, M. D.—two-page reprint from the *Bulletin* of the American Society for the Control of Cancer, Jan., 1933. A plea for proper methods of biopsy.

Re. 4.—*The Doctor's Practical Relation to the Cancer Problem*, by William Carpenter MacCarty, M. D. —a five-page reprint from the *Bulletin* of the American Society for the Control of Cancer, May, 1933. Points on prognosis.

Re. 6.—*The Responsibility of the Practitioner in Menopausal Bleeding* by James E. King, M. D.—three-page reprint from the *Bulletin* of the A. S. C. C. July, 1932.

Re. 7.—*Early Diagnosis of Carcinoma of the Cer-*

vix by Dr. Henry Schmitz—three-page reprint from the *Bulletin* of the A. S. C. C., June, 1933.

Re. 8.—*The Family Physician's Place in the Control of Cancer of the Uterus* by S. W. Cathcart, M. D.—three-page reprint from the *Bulletin* of the A. S. C. C. Nov., 1933.

2018.—*Transillumination of the Breast* by Max Cutler, M. D.—16-page reprint, 1933. On the use of transillumination as a confirmatory aid in diagnosis.

2019.—*Cancer of the Breast by* Grantley W. Taylor, M. D., F. A. C. S., reprinted from the *International Abstract of Surgery*, July, 1932. Prepared at the request of the Comm. on the Treatment of Malignant Diseases, Amer. Coll. of Surgeons. 24 pages. Review of methods of diagnosis, treatment and results. Bibliography.

2020.—*Collective Review of the Recent Literature on Malignant Tumors of the Uterus* by George H. Gardner, M. D., F. A. C. S., and George C. Finola, M. D. Reprinted from *Surgery, Gynecology, and Obstetrics*, Jan. 1934. 24 pages. Review of Methods of Treatment and results. Bibliography.

2021.—*Radiosensitivity of Tumors* by Fred W. Stewart, M. D., reprinted with additions from the *Archives of Surgery*, Dec., 1933. 88 pages. A technical presentation of special interest to radiologists.

2024.—*Cancer of the Stomach* by Howard K. Gray, M. D., and Donald C. Balfour, M. D., reprinted fro the *American Journal of Cancer*, Oct., 1934. 28 pages. A technical presentation with bibliography.

The Oklahoma City Clinical Society announces in this issue that its Annual Fall Conference will be held October 28 to 31, inclusive, at the Biltmore Hotel in Oklahoma City. The list of guest speakers carries the names of many of the outstanding physicians of America, and we are assured of a diversified, well balanced program. The meeting is arranged primarily for the general practitioner. There will be four days of lectures and symposia on every phase of medicine, with particular reference to the needs of the doctor in general practice.

Dr. Nathan B. Van Etten, President of the American Medical Association, will speak at a banquet given by the Oklahoma County Medical Society in his honor on Monday evening, October 28. The annual clinic dinner and dance will be held at the Chamber of Commerce Tuesday, October 29. The smoker, an affair anticipated from year to year, will be held at the Oklahoma Club, on the night of October 30.

This clinic is an intensive postgraduate course, broken by well timed hours of pleasure. We recommend it to our readers.

Correction — Committee Personnel. — The August number of the JOURNAL carried a list of officers, councils, committees, and so forth, of the Association for the current administration. Unfortunately, a clerical error crept into the list. It was a very unfortunate and regrettable error, but of the sort which occurs inevitably in the best regulated offices of record. While the error was basically clerical it ramifies into so many other phases of the work of the Central Office that it is, indeed, strange that it was not caught. Even so, it has happened, and we are doing our best to make correction and amends, in all humility.

The personnel of the Council on Scientific Work included the names of three members of the Council on Medical Economics, in lieu of three members of the Council on Scientific Work. The personnel of the Council on Medical Economics was shown correctly. The correction is, therefore, to the following effect:

COUNCIL ON SCIENTIFIC WORK

Ex-officio, the President and Secretary and Officers of Scientific Sections.
A. C. Scott, Sr., Chairman, Temple (five years).
Jack Daly, Fort Worth (four years).
C. C. Green, Houston (three years).
Robert Moore, Dallas (two years).
J. E. Robinson, Temple (one year).

Alien Registration.—As a part of the National defense program, a nationwide registration of aliens will be conducted in this country from August 27 through December 26, 1940. This is a worth while enterprise, and very important to the country as a whole. It is believed that the medical profession can help a great deal in the successful prosecution of the plan. First and last, all aliens in the country come to the attention of practicing physicians. The physician will not always know whom among his patients are aliens, but quite frequently he does know, and when he does know a patient to be an alien he can help greatly by explaining the matter to the patient and inducing him to comply with the requirements of the law which is bringing about the registration and identification of these people. It is a law, and one for the violation of which a severe punishment is possible.

There is no reason why an honest, well-intentioned alien should fear registration. There is no stigma of any sort involved. It is purely a matter of such bookkeeping as should be required in the face of the defense emergencies impending at this time. All aliens of 14 years or over are required to register and be fingerprinted. By aliens, of course, is meant those who are not citizens of this country, regardless of reason for non-citizenship.

It will be remembered that we or our forbears have at one time been emigrants, and, consequently, aliens. Some of the finest service rendered our country in its several wars was rendered by aliens. Of course, there are aliens who are not so fine as these have been. Indeed, there are aliens, and even citizens, who would destroy our democratic form of government and substitute therefor another

sort, a sort which is not compatible with, or even tolerable to the American way of thinking and living. Our potential citizens, who are temporary aliens, can well afford to register and be fingerprinted if by doing so the objectionable type are identified and properly dealt with. The doctor can help a lot by making all of this clear to the aliens among his patients and patrons, and by urging them to register without delay. Registration is in every instance by the postal authorities. There is no cost to the registrant.

Tarrant County Medical Society Fall Clinic will be held September 24, at the Hotel Texas, Fort Worth. One entire day, including morning, afternoon and evening sessions, will be devoted to intensive study of subjects of particular interest to both the general practitioner and the specialist.

Guest speakers for the clinic are:

Dr. Karl A. Menninger, Neurologist and Psychiatrist, Menninger Clinic, Topeka, Kansas.

Dr. Willard R. Cooke, Professor of Obstetrics and Gynecology, University of Texas Medical School, Galveston.

Dr. Virgil S. Counseller, Surgeon, Mayo Clinic, Rochester.

In addition to the formal discussions of guest speakers, clinical cases will be presented by Fort Worth physicians and discussed by the honor guests.

Tarrant County Medical Society extends a cordial invitation to the medical profession of the State to attend the clinic. A registration fee of $2 will cover the cost of both luncheon and dinner. Attendance on the clinic will be a worth while investment in the intensive clinical study offered and the inspiration to be received from contact with fellow practitioners.

CASE OF RUPTURE OF LACTEALS

An unusual case of rupture of one of the intestinal lymphatic glands (the lacteals, which take up the milky fluid called chyle from food after its digestion) is presented in *The Journal of the American Medical Association* for June 8 by Ronald L. Maier, M. D., New York, who believes that this is the first acute case to be reported. His patient was perfectly well before the attack.

The attack consisted of severe abdominal pain. The patient was hospitalized and operated on. The preoperative diagnosis was perforation of the intestinal tract. When the abdomen was opened the lacteals were prominent and distended. Some chyle was spilled into the cavity. Observation at operation, Dr. Maier states, "suggests that there was a rupture of one of the lacteals caused by obstruction of the duct that collects chyle, with back pressure on the smaller lacteals. Whether or not the condition will recur remains to be seen, but to date the patient has had no symptoms."

INFECTIOUS MONONUCLEOSIS*

ROY R. KRACKE, M. D.
EMORY UNIVERSITY, GA.

So much has been written about infectious mononucleosis in the past few years that it may appear as useless repetition to discuss this disease. However, during this time so many new facts have been brought out, its recognition has become so widespread, and its various clinical manifestations are so protean in nature that it seems advisable to review briefly the status of infectious mononucleosis today.

There seems to be little doubt that this is the same disease that was described by Pfeiffer[8] in 1889, which he stated occurred mainly in children and was characterized by lymphadenopathy and a febrile benign course, and which usually terminated in recovery. Blood studies were not done at that time to any considerable extent. Also Filatow,[5] a Russian pediatrician, described a disease that he called "idiopathic adenitis" which probably was the same one that we know today as infectious mononucleosis. In 1896, this same disease was described in American literature by West[11] under the name of "glandular fever" when he described an epidemic that he observed in the eastern part of the State of Ohio. This disease, therefore, probably has masqueraded under many different names. Some that have been used at various times and probably all referring to infectious mononucleosis are glandular fever, lymphoid cell angina, monocytic angina, acute benign lymphoblastosis, acute lymphadenosis, and many others.

Modern interest in this disease dates from 1920, when Sprunt and Evans[10] grouped a large number of cases they had seen and applied the current designation of "infectious mononucleosis." Since then the literature has contained a constantly increasing number of articles. Although it came to be generally recognized from the period 1920 until 1932, it was not until the latter date that the discovery of the heterophile antibodies in the blood by Paul and Bunnell[7] again stimulated a renewed interest and enthusiasm on the part of immunologists in particular.

INCIDENCE

Infectious mononucleosis seems to occur at all ages and cases have been reported in patients as young as 6 years to a few above 70 years of age, although it is true that most of the victims are young persons, from the age of puberty up to the early twenties. Within the past two years I have studied be-

*From the Department of Pathology, Emory University School of Medicine, Emory University, Ga.

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tween thirty and forty cases of infectious mononucleosis. Since my work is mainly in a university a large percentage of the patients with whom I come in contact are university students. Therefore, the fact that a majority of these forty people have been in the young age group might be accounted for on that basis. I have seen one child 7 years of age with the disease, and a railway engineer 62 years of age, whose case was shortly followed wtih the development of the disease in his wife, who was 58. It has been the experience of most observers, however, that the disease is seen more frequently in young people, particularly in institutions and schools and other areas where they are brought together in groups. I have noticed no difference in the incidence in males and females. Nearly one-half of the cases I have observed have been in young women, mainly in the student body of Agnes Scott College, a girls' school near Atlanta, Ga.

Similar to agranulocytosis, this seems to be a disease mainly of white people and has been observed very rarely among negroes. As a matter of fact, we have watched for it in a large negro hospital population in the Grady Hospital of Atlanta, but have not yet seen a verified case.

Infectious mononucleosis evidently appears in all parts of the world. The early cases that were studied in Russia have been followed by reports from the American continent, from practically all countries of Europe and Australia and from the Orient. Although the cases I have seen were observed mainly in the fall and winter months a study of the literature reveals no definite seasonal incidence. The apparent prevalence in the winter months seems to be coincident with the opening of schools.

ETIOLOGY

Since infectious mononucleosis appears clinically to be an infectious disease as the name implies, a considerable number of investigators have attempted to throw light on its cause. From the very beginning various bacteria have been suspected as being causative. Many of these have been recovered from the nose and throat of those suffering with oral lesions and certain others have been recovered from the blood stream, and still others from the biopsied lymph glands; many studies have been done, but as yet no conclusive evidence has been presented to indicate that any organism may be causative in all cases. Many observers have noted that constipation is a marked symptom in most cases of infectious mononucleosis and because of this have assumed that there is some disturbance in the gastro-intestinal tract resulting in the disease. The fact that most patients have cervical lymphadenopathy and sore throats of varying degrees has led to the assumption that Vincent's organisms or other organisms of the nose and throat might be responsible. Fundamentally, it is not known whether infectious mononucleosis is caused by an organism of an unusual type that produces a very unusual immune reaction or whether it is an ordinary bacterium that produces an unusual type of cellular body reaction.

Many animals have been injected with the various bacteria recovered from these cases. For the most part these have included monkeys, guinea pigs, rabbits and mice. A report of recent interest is that of Wising[12] who removed under sterile conditions the lymph nodes from several patients, macerated them and injected the macerated material into monkeys. In this way he was able to produce a disease process that simulated infectious mononucleosis, but he reported no heterophile antibody tests on the animals, so it is not known whether he actually produced the disease. Of perhaps more interest is the fact that one of the workers engaged in this project accidentally pricked his finger in the course of transmission of the material with an infected knife blade and this worker subsequently developed a proved case of the disease. This would appear to be suggestive evidence that there is some infecting agent in the lymph node of the patient that is transmissible from human to human, but not necessarily transmissible to monkeys.

Other important work has been that of Bland,[2] who in one case of the disease isolated a protozoan from the blood that he called the "GF 1 strain." He injected the blood of this case in rabbits and was able to produce a disease that also simulated infectious mononucleosis. It had a similar action when injected into monkeys. However, Bland's work has not received adequate confirmation.

Another organism of considerable interest is that known as Bacillus monocytogenes hominis which was isolated by Nyfeldt[6] from cases of infectious mononucleosis. He injected this organism into dogs and produced a blood picture similar to that seen in the human being. Schmidt and Nyfeldt[9] in a later report stated that they recovered this same organism from the spinal fluid from four out of five patients who were suffering with infectious mononucleosis, yet these patients did not give symptoms of meningitis. In all probability the recovery of this organism and the work done with it has offered the most promising lead to the etiology of the disease. Although there are sporadic reports of the isolation of streptococci and

diphtheroid bacilli and other organisms from these patients, the evidence is not conclusive that they are causal. It must be stated, therefore, that at this time infectious mononucleosis is a disease of unknown etiology. It is quite possible that the cause of the disease is a virus, and there are some features that would indicate this. There seems to be little question but that a single causal agent may be contacted simultaneously by a group of people or may be rapidly transmitted from one person to another. For example, I have observed a medical student in my own class who contracted the disease, this to be followed quickly on successive days by three other medical students developing the disease. It is not unusual to observe two or more cases at one time in a group of students. This would suggest a transmissible agent. It does not follow, of course, that the agent is transmitted from person to person, but it may rise from a common source, perhaps from some unknown insect vector, or it could be transmitted by intermediate objects.

In our department at Emory University my associate, Dr. Francis Parker, has carried out some experiments in an effort to throw light on the etiology. He very carefully washed the nasal passages and throats of three medical students suffering with the disease, using Locke's solution. These washings were then passed through a Berkefeld filter, the filtrate placed in ordinary nasal sprays, or atomizers, and the noses and throats of some twelve student volunteers were sprayed with this material on three successive days. Careful blood studies, heterophile antibody tests and clinical observations of these twelve students were made but in no instance did the disease develop and in no instance was there any change in the blood to indicate that the material was effective. Of course such experiments do not rule out the possibility of this being a virus disease, because under such circumstances a virus could be present and yet be incapable of infection, or it could be so changed in the process of collection that it would be incapable of infection.

In summary, then, it should be stated that the cause of infectious mononucleosis is unknown but that the disease appears to be a febrile disorder caused by some type of infecting agent.

THE CLINICAL MANIFESTATIONS

Because infectious mononucleosis gives rise to such varied types of clinical manifestations, some authors have attempted to classify it into various forms; for example, there have been mentioned the febrile type, the glandular type, and the angiose type. However, it becomes rather difficult to place all cases even in these three types.

The onset of the disease is varied. The symptoms may occur suddenly and the disease process develop suddenly. In other instances it may be more prolonged, covering a period of several days and even in a few patients, which I would designate as the "walking type," the manifestations are so mild that the disease may go entirely unrecognized. It may begin with a chill, or sweat, and some have headaches lasting for one or more days. There is general malaise. In some patients there is fatigue and prostration which seems to be out of proportion to the severity of the process. There may be anorexia or even vomiting in an occasional one. Most patients have a sore throat which is quite varied in its manifestations. In about 50 per cent of them the throat shows only a diffuse injection, whereas in others there may be definite localized lesions consisting of follicular tonsillitis or pharyngitis or deep ulcerations in some and in others the actual formation of what appears to be a membrane. In some patients, however, there may be no throat manifestations of any kind. There may be pain in the cervical areas posteriorly and in an occasional patient this may be so severe as to be suggestive of a state of meningismus; indeed, in some of these if spinal punctures are done there may be an actual increase in the lymphocytic cells of the spinal fluid to such an extent that it might be classified as a so-called acute benign lymphocytic meningitis.

An occasional patient may present abdominal pain as a symptom and in such instances the condition must be differentiated with considerable care because there are at least two reports where patients have been operated upon for appendicitis that were actually cases of infectious mononucleosis. On one occasion I am sure that I prevented an operation for appendicitis by observing the typical blood picture in the course of a routine blood count preliminary to operation. Apparently the abdominal pain arises from the lymphadenopathy in the mesenteric areas, because in those cases that have come to operation it has been found that the mesentery is studded with enlarged lymph glands. Infectious mononucleosis should be considered in the acute surgical abdomen where adenitis is found and even in cases of gangrene of the intestine from blockage of the mesenteric vessels by enlarged glands.

Infectious mononucleosis is practically always a febrile disorder. The fever usually appears fairly early and reaches its peak within about a week. It is of a remittent type with the peak occurring in the after-

noon. The fever varies a great deal. In some instances it may not range more than 100° C., whereas in others, particularly in children, it may reach much higher figures. The fever may persist for one to two weeks with an average of some eight to twelve days before it begins to subside. Here again there is great variation in the febrile course. The pulse usually runs parallel with the fever, although some workers have noted that the pulse rate is somewhat slower than might be expected for the degree of temperature.

One of the important diagnostic criteria for infectious mononucleosis is the presence of lymphadenopathy. There is considerable variation in this finding since in some cases only localized groups of glands are involved. There is also much variation in their size and time of appearance. However, any condition in which there is not generalized lymphadenopathy makes questionable the diagnosis of the disease. The enlarged glands may precede the appearance of the fever or may follow in occasional instances. In my experience there is usually lymphadenopathy before fever develops. Nearly all cases show enlargement of the cervical glands, usually posteriorly, but the anterior groups may also be involved. Whatever the location of the lymph glands, they are usually moderately enlarged from one to two cm., always discrete, rather firm on pressure and usually not very painful. I have noted in those cases where lymphadenopathy is extremely marked there is also a correspondingly marked increase in the total number of circulating leukocytes. Although this is not an invariable rule, the cases that have shown the most marked lymphadenopathy have also shown the most marked leukocytosis. In some cases, the lymphadenopathy may be barely detectable with a generalized enlargement of the cervical glands, the axillary and inguinal groups and the epitrochlears. As pointed out before, there are some in which the superficial glands may not be enlarged but the involvement extends only to the deep seated glands, frequently the mediastinal group and in other cases the mesenteric group. This lymphadenopathy is only transitory. It usually disappears within the course of a few days with an average duration of some eight to ten days. The patient often times becomes afebrile before the glands disappear and even for some weeks later a slight palpable enlargement can be detected.

Since the spleen is essentially a lymphoid organ it may be enlarged in cases of infectious mononucleosis and a definite splenomegaly can be palpated in as many as 50 per cent of the patients. Usually the splenomegaly is moderate in degree with the lower border of the spleen being barely palpable or extending perhaps 3 to 4 cm. below the costal margin. I have seen one case in which the lower level of the spleen extended to as low as the umbilicus. In such instances, of course, there may be confusion with a leukemic process. In some instances the liver may be enlarged and this is to be expected in any disease in which there is unusual reticulo-endothelial proliferation. The liver enlargement, however, in most instances is hardly sufficient to occasion any considerable concern. In some patients there may be an intrahepatic type of obstruction with the development of a mild type of obstructive jaundice, but this, too, is a rare finding.

There may be skin lesions in infectious mononucleosis. These have been described under a variety of terms; thus, there has been described such lesions as a typhoid-like eruption, a morbilliform eruption, a scarlatiniform eruption and a typhus fever-like eruption. An occasional instance has been described of a vesicular or urticarial type of eruption and then not a few cases will present a hemorrhagic syndrome so that the abdominal wall and trunk may be stippled with minute hemorrhages. This latter finding is said to be relatively common, but in observing approximately forty cases I have seen it in only one instance, so in my experience it is quite rare.

Only in recent years has it been recognized that this disease may develop symptoms referable to the central nervous system. Presumably such symptoms develop because of the infiltration of the predominating leukocytes into the spinal canal. For that matter cases have been reported in which there are several hundred lymphocytic cells per cubic millimeter in the spinal fluid. Bernstein[1] in his excellent review, states that there have been twelve cases of infectious mononucleosis accompanied by a clinical picture of serous meningitis. This is the same type of meningitis that could be called "benign lymphocytic aseptic meningitis." In such instances the patient may actually show such central nervous symptoms as stiff neck, a positive Kernig and Babinski sign and there even may be convulsions and occasionally stupor or coma. Needless to say in such instances recovery occurs as in the ordinary course of the disease.

FINDINGS IN THE BLOOD

The blood findings in infectious mononucleosis in nearly all cases are fairly typical. There is usually a definite leukocytosis in which the total number of leukocytes is increased, usually from ten to twenty thou-

sand cells per cubic millimeter and in rare instances to as many as fifty or sixty thousand per cubic millimeter. Although certain writers have expressed the opinion that there are different blood changes in the epidemic and sporadic cases, I have not been able to recognize this. An absolute and relative lymphocytosis is the first sign of the disease in the blood, although an occasional patient may have an actual leukopenia with decrease in the granulocytes, particularly in the earlier stages. Of course it should be recognized that by the time the patient consults a physician symptoms have developed and it is not possible to say what the blood picture was in the very early stages of the disease. I have noted in many cases a rather definite leukopenia in the earlier stages, gradually rising to a leukocytosis particularly when lymphadenopathy has become full blown and the patient has reached a crest in his febrile course. As the fever and lymphadenopathy subside so does the leukocyte count.

The most valuable diagnostic finding is the type of circulating leukocytes. The experienced hematologist has little difficulty in identifying these cells although it cannot be done in every case with absolute certainty. They are large, atypical, irregularly lobulated lymphocytic cells with a type of sky blue cytoplasm with a perinuclear clear zone. One of the important features is the presence of small variable sized vacuoles in the cytoplasm, which almost stamps it without question as being a cell of infectious mononucleosis. It should be pointed out that these cells vary greatly in their morphology in the same patient at different times and also in different patients. They vary to such an extent that they have been classified by Downey[4] into at least four different types with each of the four types being radically different in morphology from the others. The percentage of these cells may be as high as 90 per cent, and in nearly all cases they exceed 50 per cent of the total number of leukocytes. Since the infectious mononucleosis cells are not confined to a single morphological pattern, but are characterized by marked variation in their characteristics, and since their origin is uncertain, they have been referred to by Foord as the "bastard cells" of hematology. There is general agreement that the characteristic cells are derived from the lymphoid tissue, probably from the very tissues that are involved in the lymphadenopathy and in the enlargement of the spleen.

The red blood cells are usually not disturbed in infectious mononucleosis. As a matter of fact, in a differential diagnosis between this disease and leukemia this is often times a rather important diagnostic point. However, it should be borne in mind that a patient may have infectious mononucleosis to follow some pre-existing disease in which an anemia might have developed.

The blood platelets are usually normal in number, although occasionally they have been reported to be reduced. As a matter of fact, the hemorrhages in the skin that occur in the occasional patient are caused by thrombocytopenia, but this is a rare finding. There is no disturbance in the bleeding or clotting mechanism or in the tourniquet test.

THE HETEROPHILE ANTIBODY TEST

The diagnosis can usually be made by the ultimate criterion, that is, the presence of a positive heterophile antibody test. This laboratory procedure, which has come to be so valuable in the diagnosis of the disease, establishes in nearly all instances with certainty the presence or absence of the disease. A heterophile antibody is one that reacts with its own antigen and also with an antigen that seems entirely unrelated, such as the red cells of a sheep. The presence of heterophile antibodies in the blood serum of the patient with infectious mononucleosis can be easily demonstrated by making serial dilutions of the serum and adding to this a stated quantity of washed sheep cells which should be not more than four days old or less than two days old. This is followed by marked agglutination of the sheep cells by the heterophile antibodies. It is well established that these heterophile antibodies are not found in human blood except in cases of infectious mononucleosis and in the occasional person who is suffering with serum sickness.

For practical purposes, then, the finding of a high titer of these antibodies is diagnostic of the disease and it is extremely questionable if the diagnosis should ever be made unless there is an increase in titer, although it has been occasionally reported that the disease has occurred without the presence of heterophile antibodies. The titer should be 1:32 or more. The value of this test in the diagnosis of leukemia is extremely questionable. In my experience I can find no difference in the titer of heterophile antibodies in the leukemic and the normal person. The heterophile antibodies are practically always present in the early stages of the disease. If a titer of questionable strength is obtained in the early stages then the test should be repeated and the increasing titer observed similar to the procedure that is carried ou with the Widal test for typhoid fever. Davidsohn[3] states that the heterophile antibodies remain for an average period of fifty-six days

and has observed them for as long as over 100 days.

The nature of these heterophile antibodies and why they develop in infectious mononucleosis is not known. They probably are peculiar antibodies that develop as a result of extreme and quick reticuloendothelial proliferation. Furthermore, it is now recognized that not only are these antibodies produced but others as well, and a fact of considerable importance is that they may give rise to a false positive Wassermann reaction. It is now known that from 15 to 20 per cent of all patients with this disease will give false positive Wassermann reactions. This reaction develops fairly early in the disease and is usually present for no longer than eight to ten days and disappears much more quickly than do the heterophile antibodies. The tragic feature of this, however, are the cases of mistaken diagnoses for syphilis that might arise. Given a young patient with a generalized lymphadenopathy and a positive Wassermann test there is grave danger of labeling such a patient with syphilis and treating him for the disease. It should be borne in mind that here is another disease that can be added to the others that are known to give false positive Wassermann reactions. There seems to be no relationship between the antibodies that give the false positive Wassermann reaction and the heterophile antibodies. The latter can be easily absorbed out and still the blood will give the positive Wassermann reaction.

Furthermore, Bernstein[1] pointed out that there may develop other antibodies against such organisms as the B. typhosus or paratyphosus, and against food poisoning bacteria such as the Salmonella suipestifer and aertricke. So it would appear that the sudden reticulo-endothelial proliferation of this disease may be accompanied by a wholesale and bizarre production of various types of antibodies of many types.

DIFFERENTIAL DIAGNOSIS

Infectious mononucleosis is important because of the difficulty of its differentiation from other diseases, particularly those of a more serious nature. For example, because of the high leukocyte count and the peculiar immature cells in the blood it can be easily confused with leukemia and I have seen cases diagnosed as that disease that were actually infectious mononucleosis. It can be confused with agranulocytosis if there is leukopenia, and the hemorrhagic cases may simulate thrombocytopenic purpura. In those instances where there is severe involvement of the throat it must be differentiated from such conditions as Vincent's angina, ordinary follicular tonsillitis, diphtheria, and so forth. Because of the generalized lymphadenopathy, particularly the positive Wassermann reaction in some cases, it must be differentiated carefully from syphilis. All of the diseases characterized by enlarged glands such as Hodgkin's disease, tuberculosis, lymphosarcoma, etc., should be considered.

Those cases showing a rash, of course, may be confused with the ordinary exanthemata. Recently at Emory University we have had a moderate epidemic among the students of what we have assumed to be German measles. In many of these cases we have found large plasma like Turk cells that are quite similar to those sometimes seen in infectious mononucleosis. All of them have had a mild morbilliform rash and have run a short mild benign course, and in some instances the condition has been mistaken for infectious mononucleosis. If the disease is of long standing it has to be differentiated from the various fevers including typhoid, undulant fever, malaria and other febrile disorders.

COURSE AND TREATMENT

The disease usually lasts about two weeks but there is also variation in this. Some of the milder cases may terminate within a week and others may last for as long as a month and run a febrile course during this time. There is no treatment for infectious mononucleosis that is of specific value and it is symptomatic almost entirely. A great many agents have been used in the disease, particularly in recent years since sulfanilamide and related compounds have been available. Transfusions have been given in some cases and all sorts of medical agents have been employed from time to time. It is questionable if any of these are of any service whatever. The patient should be treated symptomatically, be placed in bed, but should not necessarily be isolated. One should simply realize that the disease will run its course within one, two or three weeks, that the patient usually will have an uneventful convalescence and finally will be quite well with no ill effects of a permanent nature.

In conclusion it is well to bear in mind that infectious mononucleosis is an important disease because of other diseases with which it may be confused and in particular it should not be confused with syphilis. It is virtually impossible to make an accurate diagnosis of this condition by clinical observation alone. The presence of the highly typical circulating infectious mononucleosis cells, plus the positive heterophile antibody test is almost absolute assurance of the presence of the disease and diagnosis cannot be established unless these procedures are carried out.

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TREATMENT OF PNEUMONIA WITH SULFANILAMIDE, SULFAPYRIDINE AND ITS ALLIED COMPOUNDS*

W. G. REDDICK, M. D.
DALLAS, TEXAS

In the past three years an intensive clinical investigation of the value of sulfanilamide and its derivatives in the treatment of pneumococcal pneumonias has been carried out in Parkland Hospital. In all cases the clinical diagnosis has been established by the usual findings and confirmed by the x-ray appearance; the etiological agent has been ascertained by typing sputum or body fluid or both. In the winter season of 1937-1938, sulfanilamide alone was used as the chemotherapeutic agent; in 1938-1939, sulfapyridine was available; in 1939-1940, sulfapyridine, sulfathiazol, and sulfamethylthiazol have been utilized.

In the group of patients treated with sulfanilamide were ninety-four cases. Death occurred in eighteen of the cases, producing a case fatality of 19.1 per cent. Of these eighteen cases five patients died within twenty-four hours of admission. In 50 per cent of the patients the fever dropped to and remained below 100° within twenty-four hours after treatment with sulfanilamide was instituted, irrespective of the day of disease on which treatment was begun. Positive blood cultures were obtained in only five of the ninety-four cases. Death occurred in one of the bacteremic cases. In general the fall in fever of the bacteremic cases was by lysis rather than by crisis. It is further noted that in fifty-eight patients of the total group whose treatment was instituted on the first, second, or third day of illness the mortality was 5.1 per cent.

In the treatment of these patients large doses of sulfanilamide were used; during the latter part of the season an initial dose of 120 grains of sulfanilamide in normal saline solution was administered intravenously followed by an oral maintenance dose of 15 grains every four hours, day and night, for three or four days.

In the sulfapyridine series are 220 cases; sulfapyridine alone was given in 207 of the patients and to the remaining thirteen, serum in addition was given later but only when satisfactory response to sulfapyridine was not evident. In this group death occurred in fourteen cases, producing a case fatality rate of 6.03 per cent. Bacteremia was present in 15.4 per cent of the cases.

In the majority of cases an initial dose of 30 grains of sulfapyridine was followed by 15 grains every four hours day and night for four or five days. We have not hesitated to administer an initial dose of 45 or 60 grains by mouth when the weight or clinical condition of the patient seemed to justify the larger dose. We consider it imperative that sulfapyridine should be administered for three to five days in full dosage and for another two days in half dosage. It is a not uncommon experience that fever and toxic symptoms recur after an initial improvement and that the pneumonic process spreads when sulfapyridine is for one reason or another discontinued just after the early drop in fever. In these latter cases convalescence is greatly prolonged.

In our earlier experience with sulfapyridine we formed the opinion that pneumococcus typing was often difficult or impossible when the patient had earlier received sulfapyridine. This is at variance with the experience of Blankenhorn, Finland, and Reimann. In the past four months retyping of sputum has been carried out in seventy-nine patients after an initial typing has been done and after the patient had received sulfapyridine for only twenty-four hours. In thirty-three of these seventy-nine cases capsular swelling and type identification could not be ascertained. In a recent case of pneumococcal meningitis in which sulfapyridine had been given before admission to the hospital, the blood and spinal fluid cultures showed heavy growth of pneumococci but type identification was not successful although the pneumococcus was injected into

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*Sulfapyridine used in this study has been supplied by the Calco Chemical Company, Lederle Laboratories, Merck & Company, and by the Texas State Board of Health; serum has been supplied by the Texas State Board of Health. Sulfathiazol has been supplied by Squibb & Company and Winthrop Chemical Company. Sulfamethylthiazol has been supplied by Winthrop Chemical Company. Technical expenses have been defrayed by grants from the Variety Club of Dallas. The author expresses his deep appreciation to the Technical and House Staff of Parkland Hospital for their untiring coöperation.

the peritoneal cavity of six successive mice.

As has been the experience of all, nausea and vomiting have been the most troublesome toxic reactions. Vomiting has often been so severe as to interfere with proper oral dosage. No satisfactory method has been found to allay the nausea and vomiting. We have believed that a soluble barbiturate as a suppository has been of some little value. No case of acute hemolytic anemia and only one case of significant neutropenia has been observed. In numerous cases, sulfapyridine crystals have been detected in the urine; their presence alone signifies that the fluid intake should be increased and that careful search for red blood cells should be done. If hematuria develops the drug should be stopped; if anuria supervenes both ureters should be catheterized regardless of what the clinical condition of the patient may be.

We have used sodium sulfapyridine in solution extensively and consider it of great value under the following circumstances: (1) when as initial dosage there is urgent demand for rapid optimal blood concentration; (2) when optimal blood concentration is not maintained by oral administration if satisfactory improvement has not occurred; (3) when marked nausea and vomiting preclude further oral dosage; (4) and when oral administration is not feasible as in patients who have recently had abdominal operations.

Solution of sodium sulfapyridine must be given intravenously only; it may be given in a 5 per cent solution in normal saline solution or distilled water or in dilute solution in 1,000 cc. normal saline or 5 per cent glucose solution. For an adult of average weight the amount usually given is 5 Gm. It is entirely possible to administer sodium sulfapyridine by intravenous infusion exclusively without any by the oral route. Under such circumstances 5 Gm. of sodium sulfapyridine is given every eight to twelve hours.

It is especially imperative that adequate amounts of fluids be given when appreciable amounts of solution of sodium sulfapyridine are used. Under such circumstances, also, all clinical checks to determine evidences of drug toxicity must be observed. The nausea and vomiting after intravenous injection are just as great as following oral administration.

We have not been able to obtain clinical improvement or adequate blood concentration when even double the usual amount of sulfapyridine is given by retention enema.

There can be no doubt concerning the value of sulfapyridine in the treatment of pneumococcal pneumonias. In 220 patients receiving sulfapyridine (thirteen received specific serum in addition) the mortality rate was 6.03 per cent. In this same group the incidence of bacteremia was 15 per cent. Furthermore, no death from pneumococcal pneumonia has occurred in Parkland Hospital in a patient admitted on the first, second, or third day of illness in the two years that sulfapyridine has been available.

Since January 1, 1940, sulfathiazol and sulfamethylthiazol have been used in the treatment of pneumonia on one medical service while sulfapyridine was used on the other medical service. During the same period specific serum was used in addition if satisfactory improvement did not follow the exhibition of the chemotherapeutic agent. In general we were able to detect no difference in required dosage, toxic manifestations, or therapeutic effect between sulfathiazol and sulfamethylthiazol but we have been informed by the manufacturer that sulfamethylthiazol has been discontinued because of the rare occurrence of peripheral neuritis.

Due to more rapid absorption and excretion of the thiazols larger doses are required than in the case of sulfapyridine. The toxic effects of the thiazols are much less than those of sulfapyridine. Most patients have little or no nausea and vomiting; less than 15 per cent have significant nausea and vomiting. Thiazol crystals have been detected in the urine of several patients but no hematuria.

In the thiazol series are forty-nine patients with a bacteremia incidence of 16 per cent; in the comparable sulfapyridine series are seventy-seven patients with a bacteremia incidence of 20 per cent. But in the forty-nine thiazol patients in was necessary to use sulfapyridine or serum in 33 per cent of the patients; while in the seventy-seven sulfapyridine patients recourse to serum was made in only 14 per cent. Many spectacular results are seen in nonbacteremic patients receiving thiazol, but in an appreciable number there is a significant delay in drop in fever and in clinical improvement. Of the eight bacteremic cases receiving thiazol only two recovered on thiazol alone and these two did not appear critically ill. The remaining bacteremic cases required either sulfapyridine or serum or both. In an appreciable number of cases we have observed patients who showed no clinical improvement after two or three days of thiazol with prompt drop in fever when sulfapyridine is given.

We are convinced that sulfathiazol is more effective than sulfanilamide and less effective than sulfapyridine in the treatment of pneumococcal pneumonia.

Efficacious as is sulfapyridine, it by no means wholly replaces specific antipneumococcal serum. The clinician must have before him always the concept of how sulfapyridine

and specific serum produces its favorable results and how in general recovery from any infectious disease is accomplished. Sulfanilamide derivatives in general function by slowing bacterial growth; sulfapyridine in particular is effective in retarding growth and multiplication of the pneumococcus. Ultimate recovery in any infectious disease results only when the antibody mechanism can elaborate sufficient protective substances to overcome and eradicate the bacterial etiologic agent of the infectious disease. Regardless of how much bacterial growth may be retarded, it is the effective immunity mechanism which achieves recovery.

In pneumonia, sulfapyridine is effective by bacteriostasis, but ultimate recovery ensues because the immunity mechanism neutralizes the toxins and destroys the bacteria; specific serum is effective by heightening the effect of the immunity mechanism. Sulfapyridine injures the bacteria; specific serum improves the patient.

Our experience indicates that in general specific serum should be used in conjunction with sulfapyridine under the following situations: (1) when the patient is over the age of 50 years, (2) when bacteremia is present, (3) when a major complicating disease or pregnancy coexists, (4) when the patient is severely ill from the onset and does not show improvement after twenty-four hours of sulfapyridine therapy, (5) when treatment is begun late in the disease, and (6) when a major toxic effect of sulfapyridine precludes further administration. Little doubt exists that the combination of specific serum and sulfapyridine is the ideal treatment for pneumococcal pneumonia.

COMMENT

The time is already at hand when, under ideal circumstances of early diagnosis and early institution of adequate and appropriate therapy, recovery should take place in every patient with pneumococcal pneumonia, barring only the coexistence of some major complicating disease. Type identification of the pneumococcus must under this ideal regime be established before any sulfapyridine is administered. During the two years that sulfapyridine has been available at Parkland Hospital no patient whose treatment was begun on the first, second, or third day of disease has died of his disease.

SUMMARY

Although sulfanilamide has some value in the management of pneumococcal pneumonia its use should be abandoned since there are more effective chemotherapeutic agents.

Sulfathiazol is more effective than sulfanilamide but less than sulfapyridine.

Sulfapyridine is the most efficacious chemotherapeutic agent yet discovered for the treatment of penumococcal infections, but because of its toxic effects is not the ideal.

Judicious combination of sulfapyridine and specific serum represents the ideal treatment of pneumococcal pneumonia.

1719 Pacific.

HEMOCHROMATOSIS—REPORT OF SIX CASES*

J. C. CAIN, M. D.
GALVESTON, TEXAS

Cases of hemochromatosis are not unusually rare, but only six authentic cases are present in the five thousand autopsies done at the University of Texas School of Medicine. According to Sheldon[11] in 1935, only 311 cases had been reported since Trousseau[16] first described this disorder in 1865. Butt and Wilder[4] in 1938 reported thirty cases at the Mayo Clinic. Numerous other case reports have been made, but it is difficult to estimate the frequency of this disease. In 38,096 autopsies performed in the British hospitals, Stewart[13] found there were fifty-two, or 0.136 per cent with hemochromatosis. The cases reported in this paper represent 0.12 per cent of the autopsies done at the Pathology Department of the University of Texas. Althausen and Kerr[1] found three cases in 60,000 admissions at the University of California Hospital, averaging 0.005 per cent, the same percentage Butt and Wilder[4] found at the Mayo Clinic.

Hemochromatosis is a difficult disease to diagnose, and it is often missed unless one is thinking constantly of its possibility. It is characterized by diabetes mellitus, a bronzed pigmentation of the skin, cirrhosis of the liver, and gonadal hypoplasia. The diagnosis is rarely missed when this tetrad is present. The literature, however, is full of cases where one or more of these is absent. Of the six cases reported here, none was diagnosed before death.

Numerous theories have been proposed to explain the cause of hemochromatosis. As early as 1882, Hanot and Chauffard[7] thought that the great etiological factor was diabetes. This theory, however, is no longer of any value because known cases of hemochromatosis are found when no diabetes is present. Some investigators believe that the liver is the primary factor in the disease. In 1896 Gilbert and Grenet[6] proposed the theory that the liver cells could undergo a hyperactivity

*From the Department of Pathology, University of Texas School of Medicine, Galveston, Texas.

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with a reproduction of pigment, and hence hemochromatosis. This theory is only historically important because actually there is a decrease in liver function. In 1909 Simmond[12] suggested that the cirrhosis found in this condition was an exaggerated form of portal cirrhosis. Some French and American workers still hold to this theory. Marchand[10] in 1882 described hemochromatosis as due to blood destruction of unknown origin. Von Recklinghausen,[17] in his original description of the disease in 1898, considered it due to blood destruction. However, in view of the experimental work that has been done, there is no evidence that an abnormal hemolysis occurs. It must be clearly understood that hemochromatosis and hemosiderosis, using the latter term to denote deposits of iron pigment resulting from the destruction of blood, are two entirely different conditions.

Another interesting theory is that the disease is caused by toxins. Numerous toxins, such as bacteriological toxins, alcohol, lead or zinc, copper, and unknown toxic bodies, have all been accused. Dr. Mallory,[9] is very firm in his belief that it is due to chronic poisoning with copper. He feels that the copper destroys the erythrocytes and hence frees the iron from the hemoglobin. Althausen and Kerr[4] feel that there is a constitutional predisposition of the liver or some other organ causing hemochromatosis, along with a chronic intoxication of the susceptible organ. They feel that often the toxic factor is alcohol. Mallory[9], however, attributes the toxic qualities of alcohol to its copper content and thus fits alcohol into his theory of copper intoxication. In our series of six cases only one totally abstained from alcohol. Sheldon[11] reported that 25 per cent of his cases had a history of alcoholism.

Other investigators have attempted to explain hemochromatosis on the theory of a disorder of metabolism. Sheldon believes that hemochromatosis is explained as an inborn error of metabolism with an overwhelming incident in males. He believes there is occasionally some familial tendency. It concerns the inner metabolism of probably all the cells of the body and shows itself in two ways: one, by a disturbance of melanin; two, by the formation of iron-containing pigment in nearly all the tissues. The exact nature of the metabolic error underlying the production of the pigment is unknown. Taylor, Spiven, and Reid[14], in 1935, produced vitamin A deficiency in rats. They believed this affected the intestinal mucosa and allowed the iron to be absorbed. It is a slow process and eventually leads to hemochromatosis. This work is very recent and probably deserves further consideration.

The six cases reported came to autopsy on the service of the University of Texas Department of Pathology. The oldest case dates back to August, 1917. None of the cases was recognized clinically, and in many of the cases the histories were not complete. Case 6 was from an outside hospital, and the history was poor. The patient in Case 3 was in John Sealy Hospital less than twenty-four hours and was delirious on admission. The other cases have been thoroughly studied, and the charts show the clinical features present.

SIGNIFICANT HISTORY AND SYMPTOMS

CHART I

		CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6
Onset		Slow	Slow	Slow	Slow	Slow	Rapid
Diabetes	+		−	−	+	−	NM
Polyuria	+		+	−	+	−	NM
Abdominal Symptoms	−		+	+	+	+	+
Wasserman-Eagle Tests	−		−	NM	−	−	NM
Excessive Use of Alcohol	+		+	++	−	++	NM
Weakness	+		+	+	+	+	NM
Hereditary Tendency	−		−	?	−	−	NM
Decreased Vision	−				−		NM
Diarrhea	−		−	−	−	−	NM
Exposure to Lead or Copper	−		−	−	−	−	−

In Chart 1 the symptoms and historical facts are tabulated. Hemochromatosis was merely a contributing factor and not the cause of death. The onset of the symptoms was slow in five of the six cases. Diabetes was tested for and found present in only two of the cases. Polyuria was present in these, and also in Case 2, suggesting an early subclinical diabetes. Examination of the urine or blood was not made in Case 6. Abdominal symptoms were present in all except Case 1. These symptoms probably resulted from the terminal conditions rather than from the hemochromatosis. They are therefore of little value. The Wassermann and Eagle tests were negative in the four cases that were tested. Two of the patients showed a clinical history of an excessive use of alcohol. Case 1 and Case 2 showed a moderate, and possibly an excessive, use. The mention of alcohol was omitted in Case 6 and was negative in Case 4. Weakness was the most common symptom. Five of the six patients definitely mentioned it. Telling[15], in 1921, Sheldon[11] in 1935, and Butt and Wilder[4] in 1938 reported weakness to be common. In the cases reported here, the weakness was progressive and could not be attributed entirely to the terminal disease.

The significant signs are recorded in Chart 2. Three of the cases showed splenic

enlargement. The liver is frequently involved. Five of the six cases showed definite cirrhosis of the liver. The liver in Case 1 was nodular and, though not enlarged in size, may be classed as a cirrhosis. Gonadal hypoplasia has been emphasized by numerour writers as one of the four characteristic findings in hemochromatosis. In our series only Case 2 showed gonadal hypoplasia, and in four of the cases there was no mention of the genitalia or of impotency. The testicles of the patient in Case 4 were grossly normal. Dr. Bloomer and Dr. Nesbitt[2] reported a case of hemochromatosis with degeneration of the heart muscle and death from congestive heart failure. They feel that the heart is the site of pigmentation ir a large percentage of the cases but that it seldom leads to an interstitial myocarditis.

SIGNIFICANT SIGNS
CHART II

	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6
Enlarged Spleen	−	+	−	+	−	+
Pigmentation	NM	−	−	+	NM	+
Cirrhosis of Liver	+	+	+	+	+	+
Gonadal Hypoplasia	NM	+	NM	−	NM	NM
Enlarged Heart	+	+	+	+	−	−
Lymphadenopathy	NM	+	NM	+	NM	+
Jaundice	−	+	+	+	−	NM
Pigmented Palate-Gums	−	+	NM	−	−	NM
Dyspnea	−	+	+	+	−	NM
Abdominal Swelling	+	+	+	+	−	NM
Ascites	−	−	+	+	−	NM

In our series the heart was enlarged in four of the cases. A generalized lymphadenopathy was present in three of the six cases. Jaundice was marked in three of the cases.

Pigmentation of the skin is one of the characteristic findings in hemochromatosis. This sign usually attracts attention first, and from it the diagnosis is made. Unfortunately, in a few cases pigmentation is completely absent. Dr. H. J. John[8] reported a case in 1939 where there was none. In the thirty cases reported by Butt and Wilder[4], twenty-nine showed definite pigmentation. In the six cases reported here, two showed pigmentation of the skin. It was absent in the patients in Cases 2 and 3, both of whom were negroes. No mention was made of the skin in Cases 1 and 5. Unfortunately, there were no microscopic sections made of the skin in any of the cases. Although Case 2 showed no abnormal pigmentation of the skin, there were pigmented areas in the mucosa of the gums and palate. It is of interest that the patients in the two negative cases were negroes, and therefore any change in the skin pigmentation would have been obscured. Dr. Fishback[5] described a skin test that is positive in hemochromatosis. He injected equal parts of a sterile 0.5 per cent potassium ferrocyanide and 100th normal hydrochloric acid intradermally. This gave a prussian blue color if positive. This test was described in October, 1939, and we have had no opportunity to use it.

The age at time of death varied. (Chart 3.) Cases 2, 3, and 4 are quite typical; the

SUMMARY OF CASES
CHART III

	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6
Age	75	52	48	50	73	39
Sex	M	M	M	M	M	M
Race	White	Negro	Negro	White	White	White
Nationality	Amer.	Amer.	Amer.	Amer.	French	Amer.
Occupation	Lineman	Long-shoreman	Long-shoreman	Engineer at Water Works	Police-man	?
Final Illness	4mo.	10.5mo.	6mo.	9yrs.	5mo.	1da.
Cause of Death	Pernicious Anemia	Carcinoma of Prostate Metastases	Arterio-sclerotic Heart Disease	Staphylo-coccus Heart Disease	Carcinoma of Prostate	Traumatic Rupture of Urinary Bladder

patients died at an average age of 50 years. The patients in Cases 1 and 5 were unusually old. Of the 311 cases summarized by Sheldon[11], only four patients were in the age limit of from 71 to 75. The patient in Case 1 of our series was 75 years of age, and the patient in Case 5 was 73 years old. The patient in Case 6 was rather young and died at the age of 39. This, however, was an untimely death due to traumatic rupture of the urinary bladder. All of the patients were males. There were only fourteen females reported in Sheldon's[11] review of the literature up to 1935. The patients in Cases 2 and 3 were negroes, and the remainder were white. The occupations varied, but no significance can be attached to them. The duration of the final illness was of some

DISTRIBUTION OF IRON
CHART IV

	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6
Liver	+	+	+	+	+	+
Spleen	+	+	+	+	+	+
Pancreas	NS	+	+	+	+	+
Lymph Nodes	NS	+	NS	+	+	+
Adrenals	−	+	NS	+	+	+
Heart	−	+	+	−	+	+
Pituitary	NS	+	NS	−	+	NS
Kidneys	−	−	+	−	+	+
Gastrointestine	NS	NS	+	−	NS	+
Prostate	NS	−	NS	−	−	+
Lungs	+	−	−	−	−	−

interest. Five of the patients lived for less than eleven months after they began to have the symptoms described above. The patient in Case 4 was the exception in that he lived for nine years. This is probably the most

typical case being reported and is without doubt the oldest in the series. The first patient died of pernicious anemia. The patients in Case 2 and Case 5 died of carcinoma of the prostate. The patient in Case 3 died of arteriosclerotic heart disease. The patient in Case 4 had a terminal Staphylococcus albus septicemia, complicating a severe diabetes mellitus. Numerous attacks of diabetic coma were present at the terminal stage. The patient in Case 6 died from rupture of the urinary bladder.

Grossly, the skin may vary from the slate gray color of argyria to that seen in Addison's disease. It usually has a definite bronzed appearance. Microscopically there are deposits of hemosiderin in the corium and melanin deposits in the stratum malpighii. (Chart 4.) The liver is the organ most commonly involved. It is characteristically enlarged and firm. The surface is usually rough but may be smooth. It cuts with resistance, and bands of fibrous tissue characterize the cut surface. The deposits of pigment give it a reddish brown or rusty appearance. Microscopically the changes are those of cirrhosis and pigmentation. Bands of fibrous tissue are especially prominent along the portal spaces but may involve the lobules. (Fig. 1*a*.) Iron stains show enormous amounts of hemosiderin in the liver cells. The pigment usually destroys the cell, and fibrous tissue replaces it. (Fig. 1*b*.) Hemofuscin is also present, but it is deposited chiefly about the adventitial coat of the blood vessels.

The pancreas was involved in five of the cases reported here. It is characteristically reddish brown in color, and quite firm. Microscopically the appearance is much like that of the liver. (Fig. 2*b*.) Hemosiderin is deposited in the acini and islet cells. A slow process of necrosis occurs in the damaged cells, and the cells gradually atrophy, disappear, and are replaced by fibrous tissue[3]. The appearance of the diabetes mellitus depends upon destruction of the islet cells, which may occur early or late. The spleen was involved in all six of the cases. It varied from normal to about twice normal in size. Deposits of hemosiderin and hemofuscin were present. Iron stains showed most of the hemosiderin to be deposited about the trabeculae and the blood vessels. (Fig. 2*a* and Fig 3*a*.) There was some increase in the fibrous tissue.

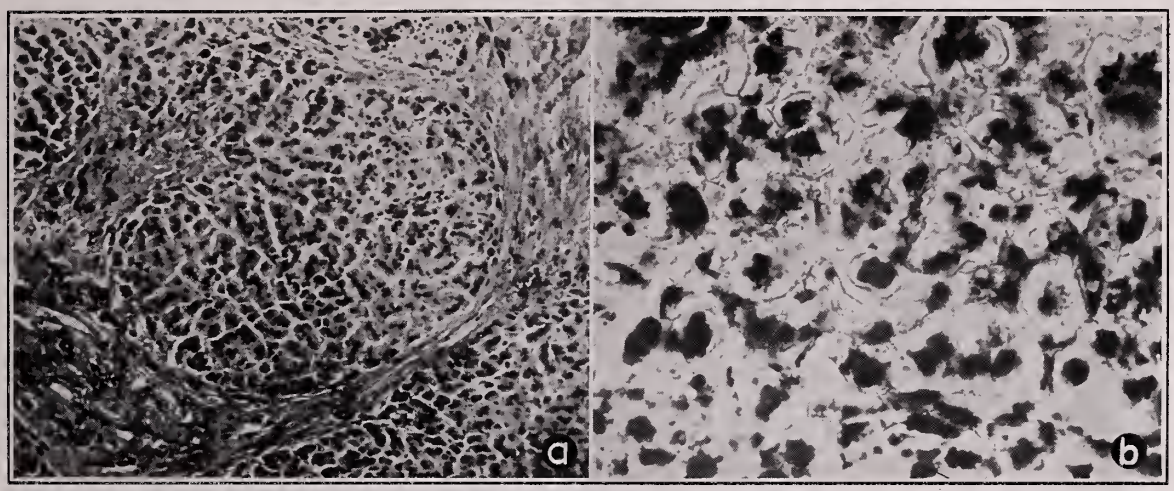

FIG. 1*a*. Low-power view of the liver. The pigment is colored black, and is seen in practically every liver cell. Notice the bands of fibrous tissue. (The section is stained with ferrocyanide and hydrochloric acid, counterstained with basic fuchsin.)
b. High-power view of the liver. The large deposits of hemosiderin inside the liver cells are causing pressure atrophy of the cells. (The section is stained with ferrocyanide and hydrochloric acid, counterstained with basic fuchsin.)

Of the lymph nodes, the portal and pancreatic are most commonly involved, but none are immune. The glands are slightly enlarged and may vary in consistency. They are deep brown in color, and the cut section is bright yellow. Microscopically, the iron stains show the hemosiderin in large amounts. (Fig. 3*b*.) It crowds out the normal structures and causes necrosis and atrophy with replacement fibrosis. The adrenal glands were involved in four cases. They were normal in size and color. The iron stain showed deposits of hemosiderin in the zona glomerulosa with very little excess of fibrous tissue.

Any organ in the body may be involved. This is illustrated in Chart 4.

SUMMARY

Six cases of hemochromatosis are reported with their histories and autopsy findings. None were diagnosed before death. Special iron stains were done on all of the tissues to prove the presence of hemosiderin. Cirrhosis of the liver was present in all cases.

Diabetes mellitus, bronzed pigmentation of the skin, and gonadal hypoplasia may be present in hemochromatosis but are frequently absent. The diagnosis is often difficult to make clinically. Better histories and closer observation of the patients might make the etiology clearer. With the establishment of the etiology, it may be possible to inaugurate beneficial therapy.

CASE REPORTS

CASE 1.— H. D., age 75, a lineman, entered John Sealy Hospital on August 21, 1917, complaining of weakness. The past history revealed that he had yellow fever in 1867 and malaria in 1907. As a young man he drank beer frequently but had not indulged for the past few years. His present illness began three months previous to his admission. Occasional headaches were present. For the past four months nocturia caused him to empty his bladder two or three times each night.

Physical examination revealed an emaciated, pale, elderly man. His mentality was slightly dulled. The mouth and pharynx were negative. The abdomen was slightly distended, and the liver and spleen were not palpable. The cardiac sounds were distinct, and there was a soft systolic murmur at the base of the heart. The heart was slightly enlarged. The pulse rate was 70 per minute, and the blood pressure was 95/40. There was a scar on the glans penis, and a urethritis was present. The Wassermann test was negative, and there was no occult blood in the feces. The red blood count was 1,600,000 with 45 per cent hemoglobin. The white count was 3,800 with 65 per cent polymorphonuclears, 34 per cent lymphocytes, and 1 per cent mononuclear. A diagnosis of pernicious anemia was made.

Pathologic Diagnosis.—The patient died of pernicious anemia. The heart showed fatty degeneration, and there was marked arteriolar nephrosclerosis. Cirrhosis of the liver and atrophic gastritis were present. Hemochromatosis of the lungs, liver, and spleen was marked.

CASE 2.—L. T., age 52, a negro male longshoreman, entered John Sealy Hospital on March 18, 1936, with the chief complaint of pain in the back, shoulders, and hips. He remained in the hospital for two months, during which time he ran a low intermittent type of fever. Occasionally the fever reached 102° F. Nocturia was present, causing him to get up seven or eight times a night. There was no marked polyuria during the day. The urinary frequency was first noted about three months before entering the hospital. Weakness and vertigo were quite marked. Two attacks of epistaxis occurred in 1932. The skin changed its color, and the patient thought it was getting lighter. Increased salivation was present. Occasional attacks of chills and fever were noticed. He had lost twenty pounds in weight, and his general health was poor. There were occasional night sweats and some loss of hearing in the left ear. He was impotent for three months before entering the hospital.

Physical examination showed a temperature of 100.6° F. with a pulse of 100. Emaciation and wasting were marked. There was some pallor of the skin, and the mucous membranes of the mouth appeared deeply pigmented. A dorsal kyphosis was present and Rhomberg's sign was positive. Diffuse peripheral sclerosis was present, and the brachial arteries were tortuous. The abdomen was distended and tympanitic, and the liver was enlarged and palpable. The prostate was uniformly enlarged, and there was tenderness over both kidney areas. Examination of the blood showed anemia to be present, with 2,690,000 red blood cells and 62 per cent hemoglobin. A white blood count showed 5,900, with 61 per cent polymorphonuclears, 34 per cent lymphocytes, and 5 per cent monocytes. The urine had a specific gravity of 1.017, and was negative except for a trace of sugar. A phenosulphonphthalein test showed 0 per cent excretion during the first hour and 37 per cent during the second. Blood Wassermann and Eagle tests were both negative. A urine concentration test showed a day to night ratio of 608/500 and a specific gravity varying between 1.016 and 1.021. Numerous examinations of stools were positive for occult blood by the benzedine method. The basal metabolic rate was —12. The glucose tolerance test showed a fasting blood sugar of 79 mg.; fifteen minutes later it was 148 mg.; thirty minutes later 170 mg.; one hour later 164 mg.;

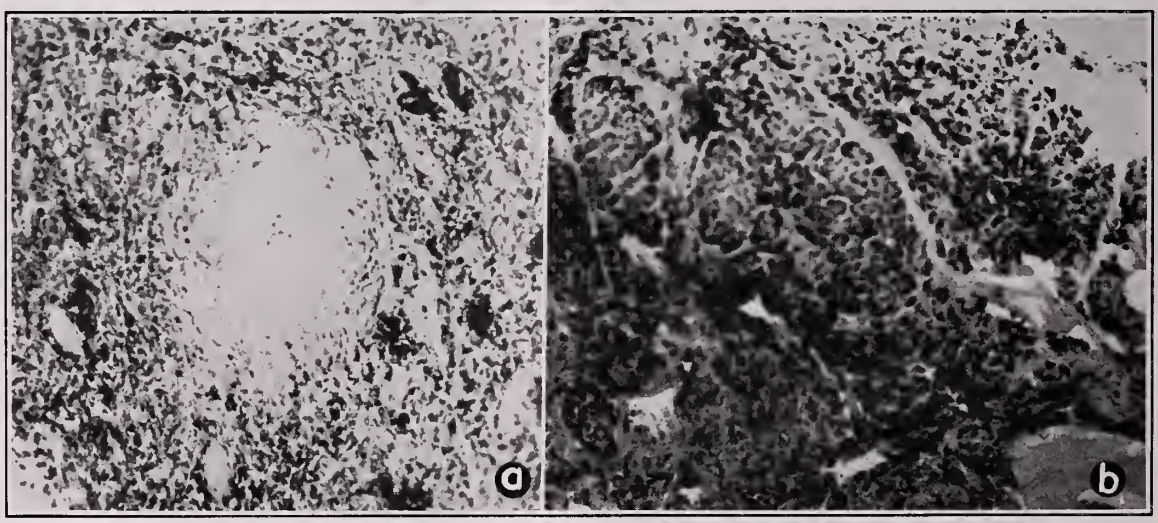

FIG. 2*a*. Low-power view of the pancreas. This shows the extreme deposits of hemosiderin in the acini cells along with some involvement of the cells of the islands of Langerhans. (The section is stained with ferrocyanide and hydrochloric acid, counterstained with basic fuchsin.)

b. Low-power view of the spleen. Numerous deposits of hemosiderin are present. Much of the iron is deposited about the blood vessels and trabeculae. (Stained with ferrocyanide and hydrochloric acid, counterstained with basic fuchsin.)

and after two hours it was 124 mg. The total blood protein was 6.87 with an albumin-globulin ratio of 1.44. The cholesterol was 1.84, and the blood chlorides were 435. The nonprotein nitrogen was 18, blood urea 8, creatinine 1.61, blood calcium 9.8, inorganic phosphorous 3.03, blood phosphotates 4.02, and the icterus index 13.5.

The patient remained in the hospital for two months and was discharged improved, with a diagnosis of Paget's disease, anomalous kidney pelvis, secondary anemia, and emphysema. He remained out of the hospital for approximately two and one-half months, returning to the outpatient clinic at frequent intervals. He continued to have pain, and his weakness progressed.

He was admitted to the hospital again July 27, 1936. At this time the chief complaint was again pain in the shoulder and severe weakness. The signs and symptoms on the final admission were

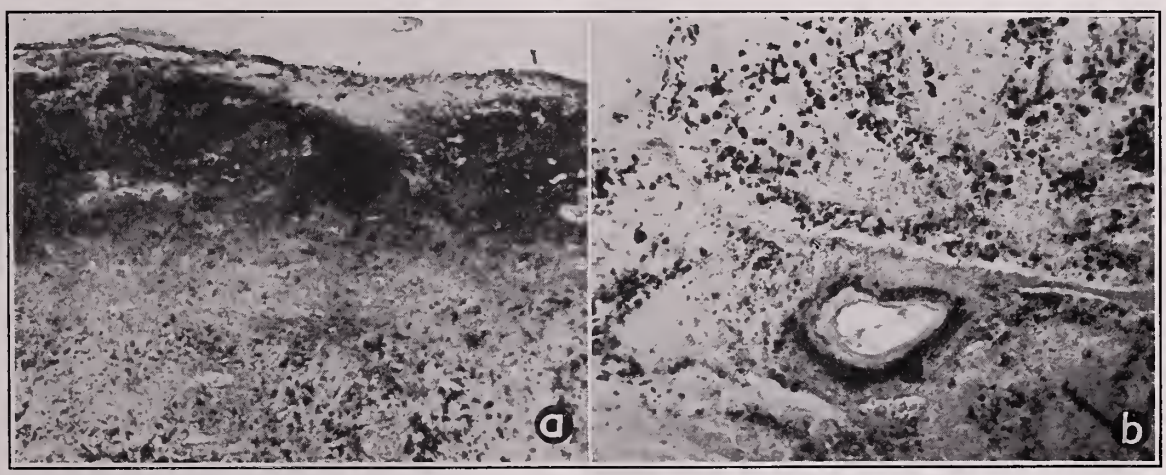

Fig. 3*a*. Low-power view of the spleen showing the marked deposit of hemosiderin in the capsule. (Stained with ferrocyanide and hydrochloric acid, counterstained with basic fuchsin.)
b. Low-power view of a lymph node. Notice the marked invasion of the vessel wall with hemosiderin. (Stained with ferrocyanide and hydrochloric acid, counterstained with basic fuchsin.)

essentially those of the first. Pigmented areas were noted at the base of the tongue and on the buccal mucosa. Roentgenograms showed definite evidence of Paget's disease. The heart rate was irregular, and numerous premature contractions were present. A sedimentation rate was done, and the curve was vertical, reaching 35 mm. in thirty minutes. Laboratory examination on the final admission showed the red blood count to be 1,960,000, the white blood cell count 4,800, and the hemoglobin 35 per cent. The Wassermann and Eagle tests were again negative. The blood phosphorus was 3.2, and the phosphates were 12.2. A glucose tolerance test showed fasting blood sugar of 88. After 50 Gm. of glucose the blood sugar was 182 mg. at the end of thirty minutes. At the end of one hour it was 194 mg., one and a half hours 177 mg., two hours 117 mg., and after three hours 72 mg. The patient was treated symtomatically. He did not improve but grew gradually weaker, lost a marked amount of weight, and finally died October 3, 1936.

Pathologic Diagnosis.—The patient died of carcinoma of the prostate with metastasis to the skull, ribs, vertebrae, and bones of the extremities. Emaciation and anemia were marked. There was slight cardiac hypertrophy along with fibrous pericarditis and coronary arteriosclerosis. There was hemochromatosis of the heart, liver, spleen, pancreas, adrenals, pituitary, and lymph nodes. There was some pulmonary emphysema and cirrhosis of the liver. Retention cysts were present on the right kidney, and the left ureter and pelvis were double. There were a few slight subarachnoid hemorrhages.

Case 3.—J. N., age 48, a negro male longshoreman, was admitted at the John Sealy Out Patient Clinic on June 20, 1935. For six months he had noted swelling of the ankles and feet. This gradually grew worse, and finally the abdomen began to swell. He had experienced fullness of the epigastrium and nausea, but no vomiting. Bowel movements were frequent. There had been no dyspnea. The urine was colored and had a foul odor. The patient drank but not to excess. The temperature was 103.8° F., and the sclera were markedly jaundiced. The heart was enlarged to the left, and the blood pressure was 146/86. Peripheral arteriosclerosis was marked. There was edema of the abdominal wall and ascites. The liver and spleen were not felt. Pitting edema was present over both legs. The urine was brown in color and positive for bile. The albumin test was negative. The following day the patient was admitted to John Sealy Hospital. At this time he was delirious, muttering, and tossing about in bed. Definite respiratory distress and dyspnea were present. His condition changed for the worse rapidly. Physical examination was the same as noted above. He became steadily worse and died on the day of admission before any laboratory examination could be made. The clinical diagnosis was heart disease, hypertensive and arteriosclerotic in character, with decompensation.

Pathologic Diagnosis.—The cause of death was arteriosclerotic and hypertensive heart disease. Coronary arteriosclerosis was marked, and the heart weighed 690 Gm. The lungs showed passive congestion, edema, and chronic catarrhal bronchitis. Hemochromatosis was marked in the heart, gastrointestinal tract, liver, pancreas, spleen, and kidneys. There was some cirrhosis along with central degeneration and atrophy of the liver. There was some hyaline degeneration and chronic interstitial splenitis. Arteriolar and arterial nephrosclerosis were marked. A few early embolic abscesses of the kidneys were noted.

Case 4.—R. H., age 50, a white male, waterworks engineer, was first seen in the John Sealy Hospital in 1925. A gangrenous inflammation of the finger was present and improved promptly. He was again seen in the Out Patient Clinic in 1929, at which time he had all the signs and symptoms of diabetes mellitus. The blood sugar was elevated, and there was

sugar in the urine. A phenosulphonphthalein test was done, with 20 per cent excretion during the first hour, 25 per cent during the second hour, and a total of 45 per cent. He was seen at frequent intervals at the Out Patient Clinic, and his blood sugar was usually high, around 200 mg. He was in the hospital again in 1933, when an appendectomy was done. Diabetes mellitus was still present. His past history is of no significance. In 1936 he had the mumps. He had frequent attacks of furuncules and had to watch his diet because of diabetes mellitus.

The family history is of no significance. His father died at 75 of prostatitis, and his mother died at 66 of heart failure. He did not drink alcoholic beverages. He drank approximately six cups of coffee a day and a glass of water about every ten minutes.

His last admission to the hospital was on December 10, 1937, at which time the chief complaint was a carbuncle over the left eye. A series of furuncules began about two weeks before admission. They would heal in one area and occur in another. There was some vomiting present but no marked nausea. He had frequent attacks of hiccoughs, which lasted as long as thirty minutes. With these attacks, dyspnea was marked. Constipation was present. He had lost approximately 13 pounds of weight. There was some loss of hearing, particularly in the right ear, and some dimness of vision. His extremities chilled easily, and he often had cramps in the legs.

Physical examination revealed a lethargic individual with placid facies. The skin was discolored over the lower extremities, and it was rough and dry. The mucous membranes were normal in color. The inguinal lymph glands were enlarged and easily palpable. The heart rate was 104 per minute, and the blood pressure was 148/80. A marked gallup rhythm was noted. There was an accentuation of the aortic second sound, but no murmurs were heard. A few rales were present at both the lung bases. The liver and spleen were not palpable. The genitalia appeared normal in size, and no atrophy of the testicles was noted. The legs had a bluish cyanotic appearance that was accentuated when they were held in a dependent position. Generalized arteriosclerosis was noted. A diagnosis of carbuncle over the left eye and diabetes mellitus was made. The patient developed septicemia due to Staphylococcus albus. The liver became palpable, and jaundice developed. Repeated urine examinations showed many casts and pus cells. The white blood count varied between 10,900 and 32,550, with 72 per cent to 96 per cent polymorphonuclears, and 15 per cent to 79 per cent young forms. The nonproteinnitrogen was normal. Blood cultures were positive. During the last week gaseous distention developed, but there was no vomiting. He gradually went downhill, and died with a diagnosis of diabetes mellitus and staphylococcus septicemia on January 21, 1938.

Pathologic Diagnosis.—The patient died of acute suppurative pyelonephritis due to a Staphylococcus albus septicemia. Focal abscesses were present in the heart, skin, muscles, and prostate. The heart also showed patchy myocardial fibrosis and coronary atherosclerosis. The left lung showed patchy atelectasis, and there was a hydrothorax (1,500 cc.). Some pulmonary edema was present. Hemochromatosis was noted in the liver, spleen, adrenals, pancreas, and lymph nodes. The liver showed slight cirrhosis and acute periportal hepatitis. There was some acute splenitis and some amyloid infiltration. A terminal acute intestinal obstruction was present along with an acute gastro-enteritis. An acute hemorrhagic pyelo-uretero-cystitis and suppurative seminal vesiculitis were noted. A draining abscess was present above the left eye along with generalized edema and jaundice. There was hyperplasia of all the lymphoid tissue. The islet cells of the pancreas were damaged, confirming the clinical diagnosis of diabetes mellitus.

CASE 5.—L. D., age 73, a French male policeman, entered the John Sealy Hospital on December 30, 1925. A diagnosis of a fractured rib and a laceration of the forehead was made. Some nausea and vertigo was present, but he was dismissed a week later improved. He was next seen in the Out Patient Clinic on June 26, 1935, complaining of pain under the right rib margin and constipation. He stated that the pain started approximately four months previous to the admission. It was dull in character and radiated to the left. There was some backache which was accentuated on standing. The pain in the abdomen was growing steadily worse, and during the last four months he had lost from 65 to 70 pounds of weight. Some vertigo was present.

The family history is of no significance. His father died at the age of 78, of a cerebrovascular accident. The past history is interesting because he had yellow fever in 1878 and influenza three times in 1918. He lost his entire family in the 1900 Galveston storm, and "five days afterwards his hair turned snow white." He was a policeman for fifteen years, working entirely at night. He was a heavy drinker and drank as much as a quart of whiskey a day.

Physical examination revealed a white, emaciated male of about 73 years of age. Pain was present and was accentuated by moving. Most of the pain was located in the back and in the region of the liver. There was no unusual pigmentation of the skin, and the mucosa of the mouth was normal. The blood pressure was 180/85, and the pulse was 80 per minute. The heart was not enlarged. The liver was palpable three fingers below the right costal margin, in the mid-clavicular line. The prostate was enlarged and tender. It was irregular in contour and very hard. No edema was present. Examination of the urine showed a specific gravity of 1.014, and it was normal in all respects. Examination of the blood showed a red blood cell count of 4,510,000 with 96 per cent hemoglobin. The white blood cell count was 10,940 with 75 per cent polymorphonuclears, 18 per cent lymphocytes, 4 per cent monocytes, and 3 per cent eosinophils. The blood Wassermann and Eagle tests were negative, and the icterus index was 6.5. The clinical diagnosis was carcinoma of the prostate with metastasis to the liver and pelvic bone.

Pathologic Diagnosis.—The patient died of carcinoma of the prostate with metastatis to the pelvic bones and pleura. Emaciation was marked. There was some endocardial sclerosis and marked atherosclerosis of the aorta. A lobular pneumonia was present on the right, along with a pleural effusion (750 cc.) and some edema. There was some chronic perisplenitis and some cirrhosis of the liver. Hemochromatosis was noted in the heart, liver, spleen, pancreas, adrenals, kidneys, lymph nodes, and pituitary. There was some urethral obstruction with acute and chronic cystitis and an ascending suppurative nephritis.

CASE 6.—H. P. J., age 39, a white male, entered St. Mary's Infirmary on October 12, 1939, and died two hours later. Two days previous to the admission he slipped while carrying fifty pounds of ice and fell on the sidewalk. This occurred at 3:00 p. m. At bedtime he voided normally. Fourteen hours after the injury he was awakened by a severe chill and fever. On admission, the temperature was 103.8° F., the pulse 112, and the blood pressure 50/0. Marked shock was present. Cystoscopy revealed a perforation of the bladder. The skin was bluish gray in color. An abdominal operation was performed, and the peritoneal cavity was found to be covered with a fibrinous exudate. He died forty-three hours after the injury.

Pathologic Diagnosis.—The patient died from traumatic rupture of the urinary bladder and peritonitis. The lungs showed chronic passive congestion and chronic bronchitis. There was some cirrhosis of the liver and chronic cholecystitis. The kidneys showed acute degeneration, hyperemia, and acute pancystitis. Hemochromatosis was marked in the heart, gastro-intestinal tract, liver, spleen, pancreas, adrenals, kidneys, lymph nodes, and prostate. There was some fatty infiltration of the pancreas.

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ABSTRACT OF DISCUSSION

Dr. May Owen, Fort Worth: I am glad Dr. Cain called our attention to the difference between hemochromatosis and hemosiderosis, using the latter term for iron pigment resulting from blood destruction. Work by Moore and others on iron metabolism may, when applied to hemochromatosis, help to explain the etiology of this condition.

The prognosis of patients with hemochromatosis has changed during recent years. With adequate control of the diabetes, the lives of some of these individuals have been prolonged over a long period. Drs. Butt and Wilder reported probably the largest series of patients observed over any period of time. One of their thirty patients lived more than thirteen years. Unfortunately, the disease in the majority of these patients is not diagnosed until late or at postmortem examination. Most of the deaths have been attributed to diabetes or hepatic insufficiency.

The treatment of patients in whom the diagnosis is made early is hampered by the lack of knowledge of the etiology of this condition. A diet rich in carbohydrates with a restriction of meat, as in liver insufficiency, was recommended by Butt and Wilder.

No explanation for the overwhelming male incidence has been shown. If, as some writers contend, this condition is a congenital inborn error of iron metabolism, it seems that both sexes would be more evenly affected. Is it probable that hemochromatosis is a symptom complex with a disturbance of iron metabolism in older persons, as is the disturbance of calcium metabolism in young individuals in whom there are more or less generalized deposits of calcium throughout the body; also, the condition known as kernicterus of the newborn in which iron pigment is deposited in tissues, particularly of the central nervous system, with atrophy of the involved cells and a replacement by fibrous tissue resulting in paralysis?

Dr. Roy R. Kracke, Emory University, Ga.: The problem of hemochromatosis is an extremely complex one involving as it does pigment metabolism about which so little is known. The etiology of hemochromatosis seems to be entirely unknown.

I have recently studied a patient who was referred to me for a chronic, macrocytic anemia. The patient presented an enlarged liver and spleen, but there was no undue pigmentation of the skin, nor was there sugar in the urine. Finally at autopsy the diagnosis was made. This was seen to be an instance of hemochromatosis which did not show bronzing of the skin, nor sugar in the urine. It was bronze diabetes, therefore, without bronzing and without diabetes. We were able to easily identify the pigment in the skin at the time of autopsy and in other tissues as well. A biopsy before this would have established the diagnosis. Since then we have learned a lesson that in seeing patients who present enlarged livers and spleens with macrocytic anemias, we routinely carry out a biopsy in order that we might not miss a case of hemochromatosis.

THE MANAGEMENT OF PREMATURE INFANTS*

GEORGE T. O'BYRNE, M. D.
CORPUS CHRISTI, TEXAS

For many years it has been recognized that the survival of a premature infant depends upon several factors, chief of which are the weight of the infant, the care of the infant, the health of the mother and the care that she receives during her pregnancy.

Since 1915, mortality during the first year of life has decreased over 50 per cent, but the mortality due to prenatal and natal causes has remained practically constant. Premature births account for 47 per cent and injury at birth for 14 per cent of our neonatal mortality, according to statistics compiled by the Children's Bureau of the Department of Labor for the year 1937.[10] In 1936, there were in the United States, 32,450 deaths in the first month of life that were reported as due to premature birth, and it is believed that 85,000 is an underestimate of the number of infants born prematurely in the United States each year.[4]

Comparisons are unsatisfactory, and particularly so when an attempt is made to analyze causes of death from death certificates in which the classification is stillborn or prematurity. In a series of 372 neonatal deaths in premature infants, premature birth is assigned as the cause of death in 79.8 per cent and injury at birth in 12.6 per cent; while in a series of 243 neonatal deaths in premature infants with satisfactory necropsies, prematurity was responsible for only 33 per cent, cerebral hemorrhage for 23 per cent, pneumonia and congenital mal-

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formations for 15 per cent.[2] It is evident that we are too prone to sign death certificates "prematurity" or "atelectasis" or "asphyxia" when the cause of death may have been "cerebral hemorrhage" or "pneumonia" or "edema of the brain."

The greatest number of premature deaths occurs in the first forty-eight hours, and Clifford[3] has demonstrated that at the Boston Lying-In Hospital it was possible to reduce the gross premature mortality from 35 to 29 per cent, and the mortality for infants weighing from 3 to 4 pounds from 40 per cent to 24 per cent. These results were obtained by better prenatal care and careful attention to the method of delivery. He concludes that the infants of mothers who had received morphine had twice the death rate of those whose mothers had not received the drug; and that delivery by the present technic of cesarean section or breech extraction is accompanied by a much higher infant mortality than is vertex delivery with episiotomy and the application of low forceps. The mortality in Clifford's cases for prematures delivered by section was 54 per cent, and by low forceps 15 per cent. Ingraham[6] reports a premature mortality of 80 per cent in his cases that were delivered by section, and 32 per cent in cases delivered by forceps. Irving,[7] reporting on a large series of deliveries, found that in those cases where no anesthesia was used, 10 per cent of the babies required resuscitation; where scopolamine and morphine were used, 60 per cent required resuscitation; and where phenobarbital was used, 40 per cent had to be resuscitated. These figures were for full-term infants, and they would be much higher in the case of the prematurely born infant.

The quality of prenatal obstetrics practiced directly influences our mortality rate. Tests for syphilis must be done early and syphilitic mothers adequately treated; infections and toxemias must be prevented where possible. Every effort should be made to delay the induction of labor as long as is compatible with safety; and cesarean section should be performed only in the presence of definite indications. Morphine should not be used, and the barbiturates very cautiously, if at all. Pituitrin should not be used. The infant's body temperature should be conserved from the minute of birth. The nose, pharynx, and larynx should be carefully aspirated. Resuscitation should be effected by the gentlest possible means. Judicious use of oxygen and oxygen and carbon dioxide and gentle artificial respiration will suffice in the majority of instances. A mechanical respirator if available is ideal. Slapping, swinging, cold immersions, ether sprays, and mouth-to-mouth insufflation are definitely not indicated in the resuscitation of a premature infant.

We all know that there is a vast difference between the successful management of an infant born prematurely and one born at term and undoubtedly some of the death certificates that are signed "prematurity" should be signed "over feeding," "chilling," "failure to provide adequate pulmonary ventilation," "needless exposure to infection," etc.

There are certain fundamental procedures necessary to the successful management of premature infants which when followed result in a mortality rate of between 20 and 30 per cent; and because I saw the rate drop in a large institution from nearly 50 per cent to 20 per cent when these procedures were instituted, they will be discussed briefly in this paper.

The smaller infants and those in poor condition are kept in incubators. These may be of the Hess type with automatic temperature control and oxygen administration, or perfectly satisfactory incubators may be made out of galvanized iron and heated by an electric light globe. These are inexpensive, can be made by any tinsmith, and are particularly recommended to the physician or institution with only an occasional premature to care for. The temperature of the incubator is so regulated by means of the light globe as to keep the infant's temperature between 98° and 100° F. Rectal temperatures are taken every four hours. Humidity may be increased by placing a pan of water and a sponge in the incubator.

For the first seventy-two hours, the feeding of premature infants can practically be made a routine procedure. However, it is during this period that a careful study of the infant will suggest a proper formula for him. It is to be emphasized that no two prematures are alike in their caloric requirements or in their ability to digest or to assimilate food; and after this preliminary period of observation, the feeding of each one is an individual problem.

For the first twelve hours no food and no water is given, and for the first twenty-four hours the infant, depending upon his weight and condition, receives from 4 to 16 cc. of breast milk and from 8 to 32 cc. of water. These are very small amounts, but over enthusiastic feeding during the first few days has undoubtedly killed many premature infants. It is of particular importance that the smaller infants be underfed because of their undeveloped digestive systems, which are easily upset.

During the second twenty-four hours, most infants are given breast milk in amounts to furnish 20 to 35 calories per pound per day.

This is administered by a medicine dropper every two to three hours. Occasionally it is impossible to feed an infant by dropper, and in such cases the formula is administered by gavage every four hours. Some prematures, even though fed by gavage, vomit persistently for the first few days, and in these cases best results are obtained by prolonged starvation and the administration of Hartman's solution and glucose subcutaneously. In some cases of vomiting phenobarbital is of value.

In addition to the formula, an effort is made to give fluids by mouth in amounts equaling one-seventh to one-fifth of the body weight daily, the formula being included in this calculation. Water, Ringer's solution or weak tea may be used. In some cases it is necessary to administer part of this fluid subcutaneously.

By the end of the first week in the majority of cases, skimmed lactic acid milk in amounts equaling one-eighth to one-sixth of the total volume, or U.S.P. lactic acid (one drop to the ounce), is added to the breast milk.

During the second or third week, viosterol in halibut liver oil, and orange juice is added to the formula. The premature infant is particularly susceptible to rickets and it is necessary to add vitamin D early. In case orange juice is not tolerated, tomato juice or ascorbic acid is substituted. At this time, also, yeast extract is given in from 1 to 4 cc. doses and apparently is of very real value.

A typical formula for an infant weighing 3½ pounds, during the first ten days to two weeks is: breast milk, 6 ounces, of which he receives three-fourths of an ounce every three hours. He is receiving only 34 calories per pound, and his weight curve is likely to be flat or to show a very slight rise. At about the tenth day, 1 ounce of skimmed lactic acid milk is added; and if the weight remains stationary and the general condition is good, during the third week the calories may be cautiously increased by the addition of breast milk and skimmed lactic acid milk.

It is to be emphasized that a failure to gain during the first two weeks is not a cause for alarm and should not be combated by increasing the food beyond these amounts. Irrespective of the feeding, some premature infants refuse to gain weight for the first two or three weeks; and a forcing of food will only result in digestive disturbances, characterized by vomiting and diarrhea, either of which is to be feared.

After the first few weeks it may be necessary to feed 50 to 60, and occasionally as high as 75 calories per pound, in order to satisfy the infant's appetite and produce a satisfactory gain. Additions to the formula are made cautiously; and in the event vomiting or diarrhea occur, the infant should be starved for from eight to thirty-six hours, and fluids administered subcutaneously. Prematures do not tolerate the intraperitoneal injection of fluids.

The subcutaneous, intramuscular and intravenous routes are used in introducing Hartman's solution, saline, glucose, or blood. The superior longitudinal sinus should never be used.

As the weight approaches 4 to 4½ pounds, sugar is added to the formula and because of the scarcity of breast milk it is often necessary to substitute evaporated milk. This substitution generally requires about two weeks.

In infants that fail to gain, even though their formula is correct and they are apparently free from infection, intramuscular injection of whole blood is of great value.

Dr. Brennemann[1] has aptly described the infant as being "half-baked." Using this classification, the premature is "served to us raw." Particularly is this true regarding his respiratory, circulatory and digestive systems, and his resistance—or lack of resistance—to infection.

These infants often become cyanotic and stop breathing. This may be due to aspiration of food and is relieved by inversion of the infant, or the use of a tracheal catheter. However, cyanosis and cessation of respiration are often due to the imperfectly developed respiratory center, as is evidenced by their prompt response to carbon dioxide and oxygen. This is a simple procedure that has saved many lives.

The circulatory and heat regulatory systems are very sluggish, and every effort must be made to maintain body temperature. This cannot be done by increasing the number of blankets because the premature infant's metabolic processes are too low to maintain an adequate temperature. He should have few covers, a cotton wrapping or a light gown and sufficient external heat to keep him warm. It is to be remembered that these infants do not tolerate high external temperatures, and in the smaller babies it may be impossible to get the rectal temperature above 96° or 97° F. without producing symptoms of dehydration. Burns in premature infants are nearly always fatal.

These infants develop a hypochromic anemia at about the twelfth week due to an inactive hematopoietic system and to the fact that they have very little iron stored in the liver at birth. Most of the iron storage in the liver takes place during the last three months of gestation, and the younger the premature, the more severe the degree of anemia he develops.

This anemia cannot be prevented, but iron

and copper are of value in its treatment. Ferrous salts are apparently more effective than ferric salts; therefore, if the infant is doing well between the second and third month, ferrous sulphate or chloride and egg yolk may be added to the formula, bearing in mind, however, that some infants cannot tolerate iron, copper or egg yolk.

The premature infant's lack of resistance to infections should be constantly borne in mind, particularly in reference to upper respiratory and skin infections. These infants should have no visitors. The nurse should wear a clean gown and a mask, and nurses with upper respiratory infections should not take care of premature infants.

The digestive system has been discussed above. Breast milk is the best food. In the event this is not available, Similac, Olac, or protein milk may be satisfactory. These infants must not be overfed during the first few weeks.

When we consider the procedures discussed here, it is apparent that most of them can be carried out fairly satisfactorily in the home or small hospital. The maintenance of body temperature with electric light globes is simple. The prevention of infection by keeping all visitors away from the infant and allowing no one, including the physician, with an upper respiratory infection to come in contact with him is not too difficult.

The nursing problem is not so easy, but an intelligent woman can be instructed as to the importance of clean gowns, clean hands and masks, gentle handling, proper bathing and feeding methods.

In conclusion, I would like to repeat that the survival of a premature infant depends upon several factors: First, the weight of the infant, and in many instances this can be influenced by the type of prenatal care afforded the mother. Second, the condition of the infant, and in some cases this is definitely influenced by the type of obstetrics practiced. Third, the management of the infant and success in this depends directly upon the physician's knowledge of the problems of prematurity, his ability to institute the necessary procedures, and his ability to provide adequate nursing care.

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1227 Third Street.

ABSTRACT OF DISCUSSION

Dr. Frank H. Lancaster, Houston: The concise and systematic manner in which this subject has been presented by Dr. O'Byrne recommends it as most practical to all of us and especially to the younger physicians in general practice.

Those things necessary to promote normal growth and development on a milk diet are not supplied to the premature infant from the mother as for the full term infant; hence they must come from outside sources. This must be done early, and because of the vulnerability of the digestive tract in the premature, utmost care is imperative. This point is emphasized by Dr. O'Byrne but it may be apropos to point out that allergic reactions may occur from abnormal absorption from an overcrowded immature intestinal tract.

Breast milk is the only food which can be safely given in the raw state, and since it is nature's own plan to give raw food, breast milk is doubly important to the premature. Artificial foods should be avoided or delayed as long as possible. "Milk banks" in hospitals should be encouraged.

Where vomiting is prominent in the beginning, whiskey, properly diluted and sweetened, may be valuable. It helps to reduce the initial weight loss, has some stimulating effect, and brings about an earlier termination of the vomiting.

I would urge more forcibly than has Dr. O'Byrne, the use of adult whole blood by intramuscular injection. It is recognized that the hematopoietic and blood vascular systems are very immature and anemia is the rule; and hemorrhages, immediate or delayed, are not uncommon. Blood injections serve as a prevention and protection in these two hazards.

HYPERTENSION MAY BE UNIMPORTANT

Although high blood pressure is frequently associated with serious disease, in some instances its occurrence is relatively unimportant and should cause no anxiety, Robert Sterling Palmer, M. D., Boston, declares in the July issue of *Hygeia, The Health Magazine.*

Furthermore, he points out, anxiety itself commonly causes the blood pressure to be twenty points higher and in some cases fifty or more points higher. Thus it is important to have one's blood pressure rechecked, in case it is abnormally high, in order to rule out this element of anxiety. Because the patient is nervous when the pressure is being taken, he is sometimes refused life insurance when the high reading is really not significant.

HARD AND SOFT WATER

There is no evidence that the hardness or softness of ordinary drinking water has any appreciable influence on arthritis, gallstones or intestinal disorders, *Hygeia, The Health Magazine* declares in answer to an inquiry.

The use of soft water for the skin may be preferable because it increases the purifying action of soaps, producing lather with less free alkali, and thus protecting the skin against the removal of its natural oils.

OCCULT SYPHILIS*

W. A. CLARK, M. D.
AND
D. TRUETT GANDY, M. D.
HOUSTON, TEXAS

The teaching of syphilis in medical schools during the past quarter-century has been elevated from a side-line subject to an important place in the curriculum. It is still too much to expect, however, that the recent graduate will be equipped with sufficient knowledge and experience to combat all ramifications of this great plague. After early education has impressed upon him its importance in medical practice, and its many diagnostic and therapeutic complexities, the young graduate, in order to qualify in the management of syphilis, must avail himself of the many educational opportunities that have been created.

Standardized systems of treatment, improper interpretation of serologic reactions, and the cost of proper care are at times deterrents in the management of syphilis, as uncontrolled prostitution and drug store prescriptions are deterrents in its prevention.

In the diagnosis and therapy of syphilis many pitfalls are encountered in subclinical expressions of the disease. Professor Wile has referred to these hidden vagaries as "occult syphilis," defining the term as "That form of the infection the lesion of which does not reach the clinical horizon."

The development of laboratory aids in the diagnosis of syphilis has been of far-reaching importance in the detection of latent, and subclinical cases which would otherwise have passed unrecognized, or at least have remained a subject for speculation.

Proper interpretation of the various laboratory tests continues to be an enigma to many physicians. The correlation of laboratory results with clinical data leading to a diagnosis of syphilis; the elimination of syphilis in the diagnosis, or the differentiation between syphilis and other diseases requires properly performed tests by a qualified, experienced technician and a thorough understanding by the physician of the clinical features of syphilis, and of conditions inducing biologic false positive reactions. The least informed among us should be familiar with the fact that a negative reaction in any of the recognized tests of blood and spinal fluid does not eliminate the diagnosis of syphilis. Failure to utilize the dark field in the examination of genital lesions is an act of negligence.

*Read before the Section on Medicine and Pediatrics, State Medical Association of Texas, Dallas, May 14, 1940.

We suggest that a standardized form of laboratory report (tables 1, 2, 3, and 4) be

TABLE 1

Patient's name and address.....
Physician's name and address.....
The blood submitted (date).....
gave a POSITIVE reaction.
TESTS PERFORMED.....

The following factors should be considered in the interpretation of this positive reaction:

1. The blood submitted should be uncontaminated by any foreign substance (perfectly clean syringe and cork stopped containers) and should have been obtained within twenty-four hours of submission to the laboratory.
2. Blood should not be withdrawn during periods of high fever, or within twelve hours after the ingestion of drugs, alcohol, or excessive fatty meals.
3. A positive reaction may occur in the blood of a small percentage of humans with no evidence of syphilis.
4. A positive reaction may persist, or recur, during or after therapy.
5. A positive reaction may occur in the following diseases: yaws, leprosy, relapsing fever, active malaria, infectious mononucleosis, lymphogranuloma venereum, and mycosis fungoides.

The test should be repeated if not substantiated by clinical evidence, or a positive history of syphilis.

In late syphilis treatment should be guided by the clinical features of the disease.

Expert consultation is advisable in case of doubt.

TABLE 2

Patient's name and address.....
Physician's name and address.....
The blood submitted (date).....
gave a DOUBTFUL reaction.
TESTS PERFORMED.....

The following factors should be considered in the interpretation of this doubtful reaction:

1. The blood submitted should be uncontaminated by any foreign substance (perfectly clean syringe and cork stopped container) and should have been obtained within twenty-four hours of submission to the laboratory.
2. Blood should not be withdrawn during periods of high fever or within twelve hours after the ingestion of drugs, alcohol or excessive fatty meals.
3. A doubtful reaction may occur in a small percentage of humans with no evidence of spyhilis.
4. A doubtful reaction may occur during treatment of syphilis.
5. A doubtful reaction may indicate transition between negative and positive reactions in active syphilis.
6. A doubtful reaction may indicate tendency to relapse under treatment.
7. A doubtful reaction may occur in late syphilis but should always be correlated with clinical facts.
8. A doubtful reaction may occur in diseases other than syphilis, particularly leprosy, yaws, malaria, trypanosomiasis, relapsing fever, spotted fever, scarlet fever, endocarditis, septicemia, infectious mononucleosis, lymphogranuloma inguinale, mycosis fungoides, pernicious anemia, leukemia, and occasionally in tuberculosis, herpes, cancer, jaundice; gonococcic, pneumococcic, streptococcic, and respiratory infections, and in persons without recognizable disease.

Expert consultation is advisable if repeated tests are doubtful and cannot be substantiated by clinical evidence or a positive history of syphilis.

TABLE 3

Patient's name and address.....
Physician's name and address.....
The blood submitted (date).....
gave a NEGATIVE reaction.
TESTS PERFORMED.....

The following factors should be considered in the interpretation of this negative reaction:

1. The blood submitted should be uncontaminated by any foreign substance (perfectly clean syringe and cork stopped container) and should have been obtained within twenty-four hours of submission to the laboratory.
2. Blood should not be withdrawn after ingestion of alcohol.
3. A negative reaction will occur in individuals free of syphilis, and during the early stage of syphilis.
4. A negative reaction may temporarily occur during or after therapy.
5. A negative reaction may occur in precocious malignant syphilis, during latent or late syphilis including syphilis of the central nervous system, and heredosyphilis, and during syphilitic "flare ups."
6. A negative reaction may occur if treatment is begun early in syphilis.
7. A negative reaction does not positively exclude syphilis.

Expert consultation is advisable in case of doubt.

Table 4

Patient's name and address	
Physician's name and address	
Spinal fluid submitted (date)	hour
Spinal fluid obtained (date)	hour
1. Kolmer-Wassermann test	
2. Cells	
3. Globulin	
4. Colloidal test	

Wassermann reaction: Strongly positive Wassermann reaction with small amounts of fluid combined with increased cells, globulin, and positive colloidal test, occurs in paretic and diffuse neurosyphilis. Positive Wassermann reaction with larger amounts of fluid, combined with increased cells and globulin occurs in early neurosyphilis and late tabetic neurosyphilis. Variations may occur requiring expert interpretation. Positive Wassermann reaction alone, with normal cell count, globulin and colloidal test is not diagnostic of neurosyphilis. Weakly positive Wassermann reaction may occur in diseases other than neurosyphilis. Negative Wassermann reaction with one or more of other factors positive is not diagnostic of neurosyphilis.

Cells: Cell count of 5 to 10 doubtful; do not disregard. Cell count above 10 abnormal.

Globulin: Substantiates diagnosis of neurosyphilis if other factors are positive. Not alone diagnostic of syphilis. Fluctuates during treatment.

Colloidal test: Mav have prognostic importance if other factors are positive. Not alone diagnostic of syphilis. Fluctuates during treatment.

All tests positive with neurologic findings in known syphilis indicates neurosyphilis. A negative spinal fluid does not positively exclude neurosyphilis. A single negative spinal fluid in neurosyphilis under treatment does not mean cure.

adopted to take the place of the many types now in use. Instead of reporting the result of a blood or spinal fluid test by means of symbols, the report would set forth concisely the clinical significance of various degrees of positivity. Serologic reactions reported in this manner would repeatedly confront the physician with suggestions for interpretation. This would lead to diagnoses based on clinical facts as well as laboratory findings.

These introductory remarks have an important place in a discussion of occult syphilis.

Physicians know yet often overlook the fact that the site of inoculation with Spirochaeta pallida is not always marked by a clinical chancre. Not only may the initial lesion be an aberrant type, but the lesion of another disease may offer a portal of entry. Examples that may be cited are: balanitis, fissure, scabies, condyloma acuminata, and endo-urethral infections. When exposure to infection has occurred the aforementioned lesions should be viewed with suspicion, and the employment of laboratory aids during a three-month observation period is justified.

Initial lesions of syphilis in unusal locations, such as the fingers or lips, are often unsuspected. A chancre of the cheek and an almost imperceptible macular eruption on the trunk was observed by one of us in an infant exhibiting generalized impetigo. The relatively inconspicuous lesions of syphilis were not noted until the discovery of mucous patches in the mother's mouth led to a more careful reexamination.

Anatomic concealment of primary lesions in women has tremendous public health significance.

Cutaneous manifestations, when typical, are easily recognized during the early secondary phase of syphilis and a positive diagnosis can be accomplished without laboratory assistance. Here again, however, subclinical types are encountered, and the differential considerations may be confusing. Recent publications call attention to macular exanthemata and false positive Wassermann and Kahn reactions in infectious mononucleosis.

Cutaneous expressions of syphilis may never occur or may be so faint as to be imperceptible to all except the careful and suspecting observer. A relatively mild macular syphilid mixed with a conspicuous outbreak of pityriasis rosea was observed by one of us.

The annular papular syphilid is easily recognized but grouped follicular papular syphilids may be confounded with other skin diseases or regarded as of minor clinical significance. Confusion of pustular syphilis with furunculosis and pustular acne is not uncommon. Dangerous, highly infectious, relapsing, mucocutaneous lesions may escape recognition by one unfamiliar with the perversities of syphilis. Errors in diagnosis are minimized, however, by the ever-suspicious syphilis-minded physician.

The diagnostic earmarks of late cutaneous syphilids are usually set down as circinate configuration, induration, peculiar color, central healing, and peripheral hyperpigmentation; but the following case illustrates the difficulty encountered in a departure from this conventional picture.

A middle-aged adult presented an oval, non pruritic, dusky-red, slightly elevated lesion in the sacral region. Syphilis was considered but clinical features were insufficient to establish the diagnosis. Knowledge of syphilitic infection was denied. A thorough physical examination threw no light on the skin lesion. Repeated Wassermann tests performed by competent serologists gave conflicting reactions ranging from negative to strongly positive. Histologic study revealed changes compatible with a diagnosis of mycosis fungoides, yet the lesion disappeared quickly after injection of mercurials. Later evidence further substantiated the diagnosis of syphilis.

The purpose of this paper is to stimulate interest in the recognition of syphilis in its varied phases of mimicry and subclinical manifestations. It would be easy to cite dramatic examples of mistaken diagnoses and the grave sequelae related thereto, but textbooks describe many such cases involving every field of medicine and surgery. Every dermatologist can supply his share of horrible examples. In such instances it is not so much a lack of knowledge that merits criticism as the failure to employ available consultation in the specialty involved.

The close relationship of all branches of medicine to syphilology is apparent in the

study of visceral, osseous, and central nervous system syphilis. The appraisal of symptoms referable to the stomach, gallbladder, liver, and spleen, without taking syphilis into account as a possible etiologic factor, leads to needless surgery. The neglect to consider nerve, cardiac, or hepatic involvement in planning a treatment regime for syphilis may result in a hopelessly wrecked patient. The orthopedic surgeon who obtains routine serologic tests will be saved embarrassment.

Syphilis of the new born could be almost entirely eliminated by routine blood tests, and treatment when indicated, in every case of pregnancy. It is a pity that this is so often neglected.

The failure to perform spinal fluid examinations and to properly interpret the reactions in every case of syphilis obscures invasion of the central nervous system in many instances. The borderline cell count in spinal fluid analysis is an ominous warning. A case in point is that of a young man who was given excellent treatment following a positive diagnosis of early syphilis. After three years of continuous arsphenamine, mercury and iodide therapy, he was apparently free of symptoms. Wassermann tests of the blood gave negative reactions. Spinal fluid examination was reported negative except for eight cells per c. mm. The possible significance of this slightly increased cell count was ignored. The patient obtained considerable treatment subsequently, at his own insistence; yet ten years later he developed symptoms of central nervous system disorder. Reexamination of the spinal fluid revealed a positive Wassermann reaction and the cell count increased to 22 per c. mm.; colloidal test and globulin remaining normal.

Reversion of positive to negative findings in the spinal fluid under the influence of chemotherapy does not always indicate a victorious termination of treatment and observation. For example, a middle aged adult had symptoms and spinal fluid findings typical of tabetic neurosyphilis. Symptomatic improvement and a completely negative spinal fluid analysis resulted after intensive chemotherapy. Subsequently, while under treatment, mild paretic symptoms developed and the spinal fluid disclosed a paretic tendency, reversing again to negative after continued chemotherapy combined with hyperpyrexia.

The relationship of trauma to occult syphilis is represented in all the different clinical phases of the disease. Although an actual break in the continuity of tissue is not necessary for syphilitic infection, trauma may be a contributing factor. As an example of the role of trauma in primary syphilis may be cited the infection introduced by tatooing and through puncture wounds in surgeons and dentists. The development of gummas has been observed in operative wounds and at other sites of trauma. In a case treated by one of us, an unrecognized gumma of the skin had been surgically removed twice, only to recur in the line of excision. When the surgeon advised a third excision, the patient sought relief elsewhere.

Trauma may be a contributing factor in syphilitic periostitis of the tibia and gummatous changes are occasional causes of malunion of fractures. Even in post traumatic inflammation of the eye, syphilis must not be lost sight of.

In an apparently normal individual head injury can precipitate paresis and a complex medicolegal problem. As a matter of fact, occult syphilis may be influenced by any degree of trauma of any tissue or organ. Stokes has aptly stated that "There is an unpredictability about the response of the tissues of a syphilitic person to trauma which, while it permits many to escape, always brings down disaster on the wrong head," and that "The great importance of these issues for industrial medicine and workmen's compensation is apparent."

The relation of occult syphilis to public health laws is an intriguing subject, a full discussion of which is not permitted by the time allotted to this presentation. Some problems involving certain current legal statutes and industrial regulations might, however, be mentioned. For instance, the emphasis placed on syphilis and gonorrhea and the neglect of food-borne diseases in food handlers is difficult to understand. Also it seems an injustice to deprive an adequately treated individual of employment, whose only symptom of syphilis is a positive blood reaction. Without fear of just contradiction we can affirm that the majority of examinations for syphilis in applicants for marriage licenses consist merely of a question or two and a blood test. Occult syphilis gets an easy pass. This flaunting of the law is a reflection on the medical profession.

In conclusion, we wish to call attention to the fact that a common error in the management of syphilis, and a cause of consequent occult syphilis, is the failure of the attending physician to explain to the patient every detail concerning his disease. Intelligent cooperation through months or years of patient and expensive treatment will not likely be secured from the individual who is uninformed, or misinformed. This preliminary discussion requires time, patience and tact.

Granting the gravity of the disease, there is the hopeful assurance that proper man-

agement can result in practical cure so that syphilis need no longer be a menace to health and happiness, especially when compared with other health hazards.

The admitted limitations of modern syphilo-therapy and lack of positive criteria of cure make of every victim of syphilis a candidate for observation throughout life.

SUMMARY

A plan for standardized uniform reporting of tests for syphilis on the blood and spinal fluid is suggested.

A brief discussion of subclinical types of syphilis is presented with illustrative cases.

The importance of careful clinical survey and individualization of treatment is emphasized.

A tactful and unhurried conversation with the patient, dwelling upon the details of his particular case, will invariably result in closer coöperation and may prevent subsequent occult syphilis.

Dr. Clark: 1625 Main Street.
Dr. Gandy: 1017 Medical Arts Building.

SELECTIVE TREATMENT OF CANCER OF THE LARYNX*

JOHN H. FOSTER, M. D.
HOUSTON, TEXAS

Sir Sinclair Thomson is authority for the very true statement that of all internal cancers those located within the larynx are the most amenable to treatment. The application of properly selected measures today shows a remarkably large percentage of cures. The blame for the fact that this percentage is not larger lies less at the door of the laryngeal surgeon than at that of the family physician and the laryngologists who do not treat such cases. This indictment is based upon two major faults: (1) Failure to recognize that every case of chronic hoarseness is a potential cancer of the larynx and to insist that the patient have a competent examination and diagnosis. Many of the patients with advanced cancer that we see have been from physician to physician for months, and sometimes for years, without being warned of the serious possibilities of their condition. (2) Failure to coöperate with the laryngologist who has made a careful examination, including biopsy, and recommended appropriate treatment. I have in mind now patients that are dead, or slowly dying, as a result of the family physician's suggestion that they try radiation instead of submitting to surgery, in cases absolutely unsuited to radiotherapy.

*Read before the Section on Eye, Ear, Nose and Throat, State Medical Association of Texas, Dallas, May 14, 1940.

While great progress has been made in handling malignancies of the larynx, as well as of other parts of the body, no one, I feel sure, would be so optimistic as to think that we have reached the *ultima Thule*. Further developments in radiotherapy, for instance, may modify our present views in a revolutionary manner. However, if one is thoroughly conversant with the knowledge available today on the subject, he can examine a patient carefully, get a competent report on a biopsy specimen, and then intelligently advise the patient what type of treatment is indicated in his particular case. While it is too much to expect that all laryngeal surgeons will agree in all details, the indications seem so clear that one can be very definite in distinguishing the line of treatment affording the greatest hope of cure with the least amount of loss of function.

Methods of treatment include: (1) Radiotherapy; (2) surgery, and (3) a combination of surgery and radiotherapy.

Radiotherapy.—When the results of fractionated x-ray treatment, as developed by Coutard, became known great hopes were aroused that surgery for cancer of the larynx would pass into discard. Hundreds of cases were turned over to the radiotherapist. Soon, however, it became apparent that, while in some cases this treatment gave perfect results, in the majority it did not. The secret lay in the histologic structure of the neoplasm, the degree of differentiation of the cells of the cancer.

Without elaborating on details familiar to all, the classification suggested by Broders is most convenient. In using this we grade cancers as one, two, three, and four as lessening in the degree of differentiation, or approach to the structure of normal cells. It became apparent that resistance to radiotherapy was in proportion to the degree of differentiation and, *vice versa*, that radiosensitiveness was in proportion to the lack of differentiation, or approach to the embryonic type of cells.

At the meeting of the American College of Surgeons in November, 1938, Coutard presented a study of his results in radiotherapy as applied to cancer of the larynx and his conclusions therefrom. This address should be read by every one interested in the subject. It was published in *Surgery, Gynecology and Obstetrics*, February, 1939. He makes the unqualified statement that while radiation is the method of choice in undifferentiated cancer, it will not cure differentiated cancer of the larynx at all, the reason being that the cartilaginous framework of the larynx will not tolerate a sufficiently heavy dosage to destroy the growth com-

pletely. My own limited experience had already forced me to the same conclusion, but back in my mind, I must confess, had been the fear that our radiotherapists were not sufficiently experienced in the newer technic to get the results apparently attained by certain men of great reputation. This pronouncement of Coutard's cleared the atmosphere considerably.

Accordingly, in my opinion, a Grade 4, or undifferentiated cancer is absolutely a case for radiotherapy, and surgery is contraindicated. By the same token, Grades 1 and 2 are surgical cases, and radiation is absolutely contraindicated. This classification holds good regardless of the size or extent of the growth as long as it remains intrinsic. I shall later refer to those cases that have spread beyond the voice-box. Grade 3 cancers are borderline cases. They are largely undifferentiated but contain some differentiated cells. They all improve greatly under radiation, and some apparently are cured. In other cases there remains the differentiated portion of the tumor which rapidly recurs. For this reason I believe surgery is preferable in this class of cases. During the past year I have seen three cases of Grade 4 cancer of the larynx, and these have rapidly cleared up under radiation.

It is often suggested that radiotherapy be tried and if it is not successful, then surgery should be used. This procedure would be ideal if it were not for the fact that the tissues are so injured by heavy radiation that they usually break down and refuse to heal after operation.

Surgery.—The surgical attack on cancer of the larynx may be by one of three methods:

1. Endolaryngeal surgery.
2. Laryngofissure.
3. Laryngectomy.

Endolaryngeal surgery has a very limited application in cancer of the larynx, but it has its place. Lynch operated by this method on some rather extensive cordal cancers with good results, but it is not probable that his example will be emulated. However, it is possible to remove small papillomatous growths which show malignancy, cauterize the base, and get a permanent cure. This is particularly true of such growths as are occasionally found in the posterior part of the larynx. They seem to form a distinct class of intrinsic laryngeal cancer. They are of a very low degree of malignancy and can be removed and cauterized several times until finally cured without spreading outside the larynx. Lynch classed these as endotheliomata, but I have not been able to substantiate this diagnosis. Pathologists whom I have had look at the slides call them epitheliomata. I have four such cases in which the patients have been well for years following endolaryngeal surgery.

Laryngofissure.—This is the operation of choice in surgical cancer which is confined to the anterior half of the vocal cords. Even the greater part of both cords may be removed. Successful results have been reported in more extensive disease, but the choice of this operation for such cases is questionable. I have on occasions found the disease more extensive than I anticipated and supplemented surgery with electrocoagulation beyond the cord with good results. In properly selected cases laryngofissure yields a very high percentage of cures. It is an effective operation, leaves the patient with a normal airway and a fair speaking voice. One such patient of mine, operated on fourteen years ago, is the pastor of a church in West Texas, preaching regularly.

Laryngectomy. — Except in undifferentiated cancer, all cases of intrinsic cancer of the larynx too extensive for endolaryngeal surgery or laryngofissure should have a laryngectomy. The technic of this operation has been so simplified that there is now practically no operative mortality and the percentage of cures is high. Contrary to a widespread impression, these patients are as happy as the general run of people and with the aid of an artificial larynx are able to pursue their usual occupations without trouble. On my last visit to Washington I saw a man whose larynx I removed eight years ago. He is a consulting engineer and talks to people, and over the telephone, all day long. I find it very encouraging to my patients after a laryngectomy to have one of these people call on them and demonstrate how well they get along.

Some patients develop a serviceable esophageal voice and prefer this to the trouble of an artificial larynx. In Jackson's Clinic patients are placed under a teacher as soon as possible after operation, and they are rather enthusiastic about their results.

Combination of Surgery and Radiation.—Occasionally we find in doing a laryngectomy that the growth has penetrated the cartilaginous framework or spread beyond its confines. In such cases it has been my custom to follow operation with a course of radiotherapy, regardless of the grade of the tumor. The cartilage having been removed, the danger from hard radiation is largely done away with. This practice has been very satisfactory.

In the case of cancers that have become manifestly extralaryngeal it has been customary in the past to class them as non-

surgical cases and to turn them over to the radiotherapist for palliative treatment. Even so great an authority as Jackson in an address at the meeting of the American College of Surgeons in November, 1939, still held this view. However, I think Fletcher Woodward, of the University of Virginia, has shown the error of this practice. He called attention to the fact that owing to laryngeal cartilages being involved in the disease, the larynx will not tolerate heavy radiation. If radiotherapy is used, there is sloughing, and the patient dies of bronchopneumonia or lung abscess. If one will do a laryngectomy and get rid of this cartilage, then there is a chance that radiation may bring about a cure. Of course, there is always danger of metastasis through the glands, and the percentage of cures will not be high, but some cases will be saved that otherwise would be hopeless.

Reviewing our records for the past fifteen months, I find that during this time I have seen twenty-three cases of cancer of the larynx. Treatment used on these has been:

Endolaryngeal Surgery	1
Radiotherapy	6
Laryngofissure	6
Laryngectomy	6
No treatment	4
	23

CONCLUSIONS

1. All cases of undifferentiated cancer of the larynx should be treated by radiation.
2. Certain small malignancies may be successfully dealt with by endolaryngeal surgery.
3. Laryngofissure is the operation of choice in differentiated cordal cancer.
4. Largynectomy is indicated in more extensive involvement.
5. Laryngectomy plus radiation is the procedure of choice in cases that have extended beyond the voice box.

1304 Walker Avenue.

ABSTRACT OF DISCUSSION

Dr. Lyle M. Sellers, Dallas: It is a privilege to be asked by Dr. Foster to discuss any paper which he presents. It is an added pleasure to open the discussion of this particular paper for it is a most carefully considered presentation. Particularly do I like the title of the paper because it sounds the keynote of our own practice in this clinical problem.

In a paper presented before this section one year ago I emphasized that we must suspect the presence of a laryngeal malignancy before we may establish its presence, and that its correct diagnosis may be obtained only from a biopsy specimen properly obtained by the laryngologist and accurately diagnosed by the pathologist, the laryngologist working by his side.

In the Tumor Clinic of the Baylor University School of Medicine we, too, depend a very great deal upon the grading of the tumor in determining the course of treatment. But we must emphasize that the relationship between differentiation and radiosensitivity is only approximate. It is not absolute. So we call to our aid additional considerations; namely, ". . . the location of the lesion; the degree and distribution of any metastases; and the results desired within possibility of attainment."*

Within the above limitations we are in complete agreement with Dr. Foster in cases of Grade 1 and Grade 4 malignancy except that in certain cases of Grade 1 we may combine radiation with surgery.

Apparently we differ somewhat in our management of Grades 2 and 3. We regard Grade 3 as essentially a problem for radiotherapy because of its degree of malignancy and because it usually has become extrinsic when first seen. Our experience ample supports our viewpoint here. Grade 2 may be, and frequently is, quite radiosensitive. These cases require a more critical degree of clinical judgment, as we regard these, rather than Grade 3, the borderline cases. Inasmuch as we have in our Clinic a radiologist of great skill we may incline to rely to a greater degree on radiotherapy than do many other groups.

In those cases requiring surgery we again call upon our most critical judgment to determine the type of surgery that will promise the greatest degree of success and comfort to the patient. In my communication of last year I stated that in our Tumor Clinic we had done no laryngectomies. This was because we had seen no case requiring laryngectomy. But this past week we were confronted with a case that will require it if biopsy reveals malignancy. It is an intrinsic growth involving both cords and the anterior commissure and is of some fifteen months duration. If malignancy is proved we will not hesitate to do a laryngectomy.

It is most gratifying to note that Dr. Foster feels that we have not reached *ultima Thule* in our treatment of cancer of the larynx. When we consider the progress that has been made in the identification of certain carcinogenic agents with their close chemical relationship to the sex hormones, and that the cancer age begins roughly with the menopause when these hormones must undergo regressive chemical alterations, and when we recall that the prominent larynx with its masculine voice is a sex characteristic of the male, and that the overwhelming majority of laryngeal cancers are found in the male larynx, then surely the physician of vision must realize that all that we have thus far accomplished therapeutically may soon pass into discard in favor of more fundamental and more certain methods of attack. But until such time, God speed Dr. Foster and his valuable work.

*Sellers, L. M.: The Clinical Management of Laryngal Carcinoma, Texas State Journal of Medicine, 35:627-629, 1940.

WESTERN EQUINE ENCEPHALOMYELITIS

A laboratory accident, which proved fatal, revealed the heretofore undetermined human incubation period of the Western strain of equine encephalomyelitis, a virus disease which is similar to so-called "sleeping sickness," Ferdinand C. Helwig, M. D., Kansas City, Mo., reveals in *The Journal of the American Medical Association* for July 27.

The victim, a prominent veterinarian, was working with the virus of the disease when, apparently because of too much power being applied to a laboratory machine, the virus was spattered all over him. Fourteen days after this accident the victim became ill and eight days later died. He had had no contact with the disease for weeks before or subsequent to the accident. Dr. Helwig says that the virus most probably entered through the respiratory passages.

AN EVALUATION OF PARENTERAL FLUID THERAPY*

J. W. TOTTENHAM, B. A., M. D.
FORT WORTH, TEXAS

The fluid requirement of any patient must be determined by the urinary output. The diversion of fluid into channels other than the urine is a factor over which we exercise such a limited control that recording the fluid intake alone is not sufficient. An accurate record must be kept of the urinary output. The kidneys are sharply limited as to the amount of waste that they can excrete per unit of water. The healthy kidney has the capacity to excrete urine with specific gravity raised to 1.030 when the intake of fluid is sharply limited. Study has shown that normal kidneys need at least 500 cc. of water each twenty-four hours in order to eliminate the usual solid waste of the period.[7] Diseased kidneys suffer a diminishing ability to form concentrated urine. Fluid loss may be sensible or insensible. The former is represented by fluid lost in the urine, stool, and vomitus, blood lost at time of operation or later, or loss by fistulas of various types. Insensible fluid loss is represented by gross perspiration from the skin and by vaporization from the skin and lungs. Clinically, it is feasible to measure the sensible loss only.

The problem of water balance in surgical cases arises more from the difficulty of supplying adequate fluid and less from any impairment or lowered function of the kidneys. With the exception of emergency operative cases, all surgical patients who undergo general anesthesia experience a period when no fluid is taken by mouth. This period varies with six hours as a minimum, according to the case and the method of preference of the attending surgeon.

Study of eighteen surgical patients, ranging in age from 14 to 58 years, resulted in the following findings. In the operating room, the insensible loss was 100 to 500 Gm. (depending upon the nature of the operation); in the postoperative ether bed, the loss was approximately 200 to 500 Gm. The essential findings for the operative and postoperative period was a total fluid loss of 1,000 cc.[1]

Fluid requirement in a medical case is influenced by formation within the body of toxins peculiar to the disease process, and a varying amount of lowered kidney function. This lowered kidney function may have as its cause nephritic changes, ranging from parenchymatous degeneration to the severest nephritis, acute or chronic. As kidney function is lowered, the ability to concentrate the urine is progressively diminished. In advanced stages of chronic nephritis it may take three times the normal amount of water to remove each gram of urinary solids. The restriction of fluids in the management of nephritis is a widespread practice based on the erroneous belief that diseased kidneys have difficulty in excreting water.

The following factors should be given careful consideration when we administer parenteral fluids:

(1) The amount of systemic wastes and toxins present in the patient.
(2) Kidney function.
(3) Function of other organs of elimination.
(4) Choice of solutions to be used.

I have listed the consideration of the amount of systemic waste and toxins present first because of its primary importance. It is our duty to assist nature in an expedient disposal of waste, metabolic in origin, and poisons, bacterial or chemical. Inasmuch as water is the solvent that makes all forms of elimination possible, in dealing with a patient in whom these wastes and poisons are present in an increased quantity, we must increase the amount of water available for elimination.

Where any suspicion exists with regard to the ability of the kidney to excrete in a normal and dependable manner, the status of the kidney should be determined. A phenolphthalien test of glomerular function and a twenty-four-hour study of specific gravity will bring to light any defect in tubule activity. If either of these tests indicate lowered function, a relative increase in the amount of fluids is considered necessary in order to make the task of the weakened kidney easier.

Interruption of normal processes of elimination by the other organs may also complicate the problem. Extensive destruction of skin as we frequently see in burns, and, not so frequently, but still too often, cases of exfoliative dermatitis, and the numerous conditions causing impairment of intestinal elimination, throw a greater burden on the other organs which also necessitates increase of fluids.

Every patient presents a difference, great or small, in the type of solution to be chosen for administration. Each day the same patient may present conditions calling for additional evaluation. All solutions must be near enough to the isotonic point that hemolysis is avoided; the acid base balance must be maintained; sodium retention in the tissues must be avoided or removed; and the crystalloid-colloid balance must be preserved.

There is a margin in which the normal electrolyte level may be varied in solutions

*Read before the Section on Surgery, State Medical Association of Texas, Dallas, May 15, 1940.

administered intravenously. Hypertonic saline solutions intravenously have frequently been used in an effort to withdraw fluid from the tissue. However, this procedure seems to be disappointing. Hypertonic saline solution will increase blood volume for a period of fifteen or twenty minutes and then the effect is lost. Some change seems to occur, so that loss of fluid from then on becomes rapid. This margin of concentration is wider in solutions to be used subcutaneously. Distilled water has been employed in 1500 cc. amounts intraperitoneally with no untoward effect.

Any evidence of disturbance of acid base ratio should receive prompt attention directed toward its restoration. Increasing respiratory rate, fruit-like odor of the breath, herpes labialis, and ketone bodies in the urine are significant of acidosis. In the presence of these symptoms dextrose solutions, with or without insulin or sodium lactate in normal solutions, should be our first choice. In cases of impending coma, or where coma exists, the plasma-carbon-dioxide combining tests should be made. If the plasma-carbon-dioxide is twenty or under, sodium lactate in one-sixth molar solutions should be administered intravenously (60 cc. of one-sixth molar solution per kilogram of body weight will raise the carbon dioxide-combining power thirty volumes per cent). Very effective is the use of 5 per cent sodium bicarbonate solution in secondary shock to combat the acidosis as well as to increase the blood volume.

Cyanosis is suggestive evidence of alkalosis as are tetany, hyperactive reflexes, nervousness, introspective attitude, and headache. Where alkalosis exists and ammonium chloride cannot be introduced by a nasal tube into the stomach, intravenous administrations of a solution containing hydrochloric acid, varying from 1:500 to 1:1500, should be used. This hydrochloric acid solution comes already prepared in ampule form and may be added to a normal saline before it is given. As the hydrochloric acid solution exists in ampule form it is hypotonic and does cause some hemolysis. Mixing it with normal saline will avoid this. Sodium ion retention in the tissues indicates the use of Hoffman's or Ringer's solutions containing but little sodium chloride.

Those patients who have been deprived of protein and who have received crystalloid solutions parenterally frequently exhibit an imbalance of the crystalloid and colloid components of the blood serum. The preponderance of crystalloid will be evidenced by edema. This complication is readily remedied by blood transfusions or blood serum prepared from the dried serum which is available for immediate use.

Elman and Weiner have maintained adequate colloids in the blood stream with positive nitrogen balance by the intravenous administration of amino acids. These amino acids are prepared by the acid hydrolysis of casein with addition of tryptophan and cystein. This is the best solution yet devised to the problem of maintaining sufficient colloid in the blood stream and, at the same time, preventing digestion of protein from vital parts. However, the method is not ready for general use.[2]

Intravenous gum acacia dextrose solutions are to be condemned. Acacia solutions causing death have appeared a number of times in the literature in the past few years. They produce liver damage in experimental animals and in humans. Evidence has shown that the acacia solutions may interfere with the gaseous interchanges of the red cells.[4]

It is well to remember that in adults when serum albumin is reduced below approximately 2.5 Gm. per 100 cc., or in children below 1.2 Gm., the administration of diuretics is ineffective in controlling edema.[3]

The normal flow of water from the blood stream into the tissue and back to the blood stream again depends on three variable factors, the osmotic tension of the blood serum, the osmotic tension of the tissue, and the hydrostatic pressure within the blood vessel. In a study of parenteral fluid therapy we need only concern ourselves with the first two. We must guard against a lowering of the osmotic tension of the blood serum and against increasing the osmotic tension of the tissue to avoid developing edema, which results from either of these changes.

In the normal blood serum or plasma the proteins exert an osmotic pressure of approximately 30 mm. of Hg. A plasma protein concentration of from 6.5 to 8.2 per cent with an albumin above four, will extract water to such an extent that 30 mm. of Hg. pressure is exerted in an manometer. As the blood enters the capillaries the hydrostatic pressure due to the blood pressure is greater than the osmotic pressure. This difference varies with the point at which the measurements are made because there is a fall in the hydrostatic pressure as the blood progresses through the capillary system, but at approximately the arterial end of the capillaries hydrostatic pressure would be about 45 mm. of Hg. Since the osmotic pressure of the serum is approximately 30 mm. of Hg., that would give a pressure gradient of about 15 mm. of Hg. Water tends to diffuse out of the vascular bed and into the extracellular spaces. On the other hand

farther along the capillaries the hydrostatic pressure falls so that at some point there is equilibrium, and, at this point, there will be an equal diffusion from within the capillary out and from the extracellular spaces into the capillary. At the venous end of the capillary with a further drop in the hydrostatic pressure we find a negative gradient of about 20 mm. which tends to enhance the transfer of water from the extracellular spaces to the capillary bed.

Extreme caution must be employed to prevent excessive administration of fluid. A case was reported in 1935, in which, following a simple cholecystectomy, a patient absorbed 9 liters of tap water by proctocylsis within a period of thirty hours after the operation. The patient exhibited a tremendous increase in temperature. A reading of over 106° was had about two hours before death. Convulsions were progressive in severity and duration. The most striking finding at necropsy was an acute swelling of the brain.[8]

This case becomes easier to understand as we remember that the colon is an organ whose primary function is absorption of fluids. Physiologically, absorption by the colon is essential and prevents too great fluid loss through the intestinal tract. Therefore, in this instance, colonic absorption continued at a rapid rate after oversaturation of the blood with fluid had occurred. This oversaturation reversed the normal osmotic exchange between the blood stream and the tissues, until the vital organs, including the brain, were so damaged that death resulted.

Acute edema of the vital organs not infrequently occurs from over administration of solutions containing sodium chloride. There is satisfactory and definite proof by research that the osmotic exchange between the blood stream and tissues is interrupted by the sodium ion. The individual cell membrane serves both as an organ of ingestion and organ of elimination by virtue of its permeability. This permeability becomes altered by excess sodium ions, losing its selective action; as a result the cell becomes greatly swollen and ceases to carry on its normal function. Silvio Markees has devised a most ingenius quantitative method for estimating the tendency to inflammation in the human organism. A standard vesicle is produced by mustard plasters (4 by 5 cm.) and after twenty-two hours, serum from the vesicle is secured, and its sugar percentage determined and compared with the sugar percentage in blood taken from the fasting patient at the same time. The quantity of sugar in the blister serum decreases with an increase in the metabolic activity of the cells in the area. Hence, the difference between the quantity of sugar in the blood and that in the blister fluid is an index of the degree of inflammation. Studying the effect of a lower salt diet upon thirty patients suffering from peptic ulcer, he concluded that the tendency to inflammation diminished by an average of 55 per cent. These cases were tested before, during, and after the low salt diet was instituted.[5]

Koenig and Hoff reported in 1931 that endemic sodium chloride injections in urticaria patients show that as to wheal formation, the chloride ion can be replaced by sulphate and carbonate, but that a positive reaction is secured only with sodium and lithium and not with potassium, magnesium, or calcium. Therefore, the sodium ion must be regarded as being the specific carrier of the inflammation increasing tendency.

It is the writer's opinion that this is the explanation for the diuretic and expectorant effect of ammonium chloride. The chloride ion being made available would unite with the sodium ion and provide for its removal. This elimination of the sodium ion and its effect on the permeability of the edematous cell membrane releases the excess fluid, brings about diuresis, and, in the case of bronchial or pulmonary involvement, increases expectoration. The release of the cells from the paralyzing edema means more than just an elimination of fluid. It means that they are able, not only to resume their physiological function, but also to again play their part in repelling the disease process.

Treatment of edema, due to excessive administration of sodium chloride solution, is therefore directed at the elimination of sodium. Ammonium chloride should be administered in as large doses as will be tolerated. If the condition of the patient is critical and circulatory collapse impending, rapid digitalization should be carried out in order to fortify the heart against the marked increase in total blood volume that results from relieving the edema. As soon as digitalization is assured, as measured by decrease of the elevated pulse rate and an increase in pulse pressure, it is well to relieve the increasing blood volume by the use of a mercurial diuretic. My preference is Mersalyl combined with Theophylline as it both increases the glomerular output of urine (Theophylline) and decreases the tubular reabsorption of salt and water (Mersalyl). The condition of the kidney must be given consideration before making the decision to use a mercurial diuretic. If a great deal of subcutaneous edema exists, more prompt diuretic action will be secured by administering the drug in the form of a suppository given by

the rectum. Some writers prefer to give one-fourth gram of strophanthin along with the diuretic rather than the digitalization mentioned above. In a series of 618 cases treated with Mersalyl (Salyrgan), Hug reports that only 2.5 per cent received kidney damage. The danger lies more in over burdening the heart and flooding the circulatory system with an enormous wave of fluids, resulting from the mobilization and absorption of the edema, rather than in causing kidney damage.

This discussion would not be complete without making mention of untoward reactions sometimes exhibited by the patient following parenteral therapy. A number of probable causes for these untoward reactions have been suggested. Extremes in temperature of solution, amount of solution, rate of flow, concentration of solution, glass and tubing used, and the *p*H of the solution have all been considered and discarded. Bacterial contamination, direct or indirect, of the solution is generally accepted as causing the chills, febrile reactions, collapse, and so forth. A great number of organisms have proven capable of so contaminating the distilled water used in the preparation of the solution.[6] To safeguard against these unfortunate reactions every care should be taken in securing a sterile distilled water.

CONCLUSIONS

An accurate record must be kept of the urinary output in order that we may determine the fluid requirement of the patient.

The amount and the type of fluid to be administered is a result of consideration of the amount of systemic wastes and toxins present in the patient, kidney function, function of other organs of elimination, and choice of solutions to be used. The choice of the solutions involves the osmotic tension of the solution, the maintenance of the acid base balance, the avoidance or removal of sodium retention in the tissue, and the preservation of the crystalloid-colloid balance.

Results from the use of hypertonic saline solutions intravenously to withdraw fluid from the tissue have been uniformly disappointing, and seem to have the opposite effect, that is, after a fifteen or twenty minute interval, the flow of fluid from blood stream to tissue became even more rapid.

A preponderance of crystalloid components of the blood serum will produce edema. Such edema disappears rapidly following blood transfusion or administration of blood serum. This serum is always available in dried form and can be used without delay. This form of edema will not respond to diuretics when the serum albumin is reduced below 2.5 Gm. per 100 cc. in adults, or below 1.2 Gm. in children. Every care must be taken to prevent a lowering of the osmotic tension of the blood serum and increasing the osmotic tension of the tissue to avoid edema which results from either of these changes.

Too much stress cannot be placed on the danger of administration of excess sodium. Indiscriminate use of saline may endanger the patient's life. An excess of sodium in the tissue causes a general and sometimes massive edema. There is enough evidence identifying the sodium ion as the carrier of the inflammation increasing tendencies to at least warrant caution and moderation in the use of saline solutions parenterally.

Bacterial contamination is now generally accepted as the cause of chills, febrile reactions, collapse, and other untoward reactions following intravenous fluid. To safeguard against these unfortunate reactions every care should be taken in securing a sterile distilled water.

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1407 Medical Arts Building.

ABSTRACT OF DISCUSSION

Dr. T. G. Blocker, Galveston: As a preface to my remarks I should like to compliment Dr. Tottenham on his thorough handling of the subject of parenteral fluid administration. On the Surgical Service of the John Sealy Hospital it is a part of the routine treatment of each patient to provide for maintenance of proper fluid balance following operative procedures. We make no effort to restrict fluids preoperatively in any anticipated extensive abdominal procedure, since in every case we begin continuous upper intestinal decompression with an indwelling nasal suction apparatus an hour or two before operation. Afterward, this tube is left in place from twenty-four to seventy-two, and in some cases even to ninety-six hours. During this period, fluid is administered entirely parenterally. We have found that in the ordinary patient the water balance and electrolytic content of the blood remain unaltered if at least 3000 cc. of normal saline is administered every twenty-four hours while the tube is in place. If the patient is dehydrated before operation, as evidenced by electrolytic imbalance, we attempt to restore him to his normal status as far as possible by the administration of parenteral fluids, usually normal saline, unless the patient has liver damage or needs additional caloric energy, in which cases 5 per cent glucose is employed, either in distilled water or in saline when dehydration is a factor as well. In many

cases, of course, these procedures are supplemented by the use of blood transfusions.

Dr. Tottenham has made mention of the edema following long administration of normal saline. It may occur even when the blood shows a normal chloride level, and we believe it is due either to excess sodium in the tissues, in which case we administer 5 per cent glucose in water, or to lowered protein content of the blood, which calls for blood transfusions to relieve the edema.

We have taken little stock in the intravenous use of sodium bicarbonate or hypertonic saline and related solutions.

Dr. A. E. Sweatland, Lufkin: I feel that we have received a very interesting paper on the subject of evaluation of parenteral fluid therapy. No doubt most of us have often thought we did not know how much to give of the fluids. We have all noted, occasionally, the edema and knew the patient was getting more than necessary. Dr. Tottenham has given us some very instructive and interesting points relative to this subject and should be complimented for so doing.

THE CLIMACTERIC*

J. H. McLEAN, M. D.
FORT WORTH, TEXAS

In asking consideration of this very common phenomenon I would apologize were it not for my very justifiable excuse of presenting a family doctor's opinion of this problem. My viewpoint is that of an average physician who regards the menopause as one of the most fascinating studies in medicine. In the first place it certainly is very prevalent; in the second place it causes untold distress in many of its subjects, and third the physician is afforded an opportunity to obtain greater satisfaction for his patient and himself than in any symptom-complex he is called upon to treat.

If the menopause were merely the "cessation of menstruation" as we have been accustomed to define it, surely little attention would be claimed by this involutional period; but the story neither begins nor ends with the cessation of the menses. The premenopausal and postmenopausal periods may cover a space of from one to twenty years and present hundreds of distressing symptoms involving every important system and organ in the body. Hence we have views widely at variance, emanating from gynecologists, internists, endocrinologists, psychiatrists, psychologists and surgeons.

These different views are natural when we recall the woman who terminates her productive life with a normal menstruation, never to see it again and without one single hot "flush," and again her less fortunate sister who experiences for years a group of distressing symptoms and concludes with a psychoneurosis or psychosis, invalidating her for life in an insane asylum. Between these extremes fall the large majority, and their complaints will vary as much as their appetites for different articles of food or social diversions.

We no longer attribute this syndrome to the uterus wandering upward and compressing the diaphragm, as was done in ancient times, thereby producing dyspnea, cardiac embarrassment, flushes, *et cetera.* Neither do we believe the menopausal woman is possessed of evil spirits.

We know the physiology of woman from infancy to old age, and the various periods of her life and things to expect regarding the menstrual and amenstrual periods. Certainly the most important one of all is the one which terminates her ability to bear children.

This period should be gladly embraced by normal women who have tired of the annoyance of monthly periods, have born their quota of children, who are now of mature years, and who finally enter the last lap of their century with time for quiet, peaceful and healthful last years. Great difference of opinion prevails as to the percentage blessed with this happy termination of menstrual life and those doomed to suffer the familiar chain of annoying symptoms.

Whether the menopause is responsible for all the syndrome accompanying it or whether the more pronounced or grave symptoms are coincidental, matters not. What we as physicians seek is a remedy for them.

The endocrinologist has pointed the way in proving that the cessation of the function of the ovary interrupts menstruation at about mid-life. This is done by the ovarian hormone (estrin) disappearing and there is no corpus luteum. Lack of control by the proper balance of hormones from the ovaries, anterior pituitary, thyroid and adrenals constitutes the etiological factor in the physical and mental changes during this period. Ovarian atrophy and loss of function touches off the anterior pituitary which, in turn, releases an increased amount of gonadotropic hormones in the circulation and these in turn acting upon the thyroid and adrenals result in an increased amount of thyrotropic and adrenotropic hormones that produce numerous symptoms through the sympathetic nervous system—with which we are all familiar—too numerous to mention in this connection. The thyroid may be so involved that operation for goiter is done before the true cause is discovered. The nervous system, including the mind, may justify calling a psychiatrist who may subject the patient to unwarranted metrazol or insulin shocks. The surgeon may be called to do a hysterectomy for profuse

*Chairman's address, read before the Section on Obstetrics and Gynecology, State Medical Association of Texas, Dallas, May 14, 1940.

bleeding from the uterus—or x-ray or radium may be used, when a little care and harmless drugs may be all that is required. I am not reflecting upon these colleagues—we may need all of them before terminating our search for relief. What I hope to emphasize is, we know the cause to be a hormonal unbalance and before resorting to more radical treatment we should use what the endocrinologist has given us first.

Whether the menopausal symptoms are from a natural or artificial cause, i.e., surgery, x-ray or radium, the line of treatment is essentially the same. Radium, x-ray and surgery all have their places in this picture, but let us postpone their use as long as is consistent with safety. One place x-ray has been used in this condition, namely, treatment of the pituitary gland, does not appeal to me, although some good results have been reported. This attack to me is somewhat radical. The type and dose of hormone used will depend upon many factors. In my hands I have no choice between several preparations—Theelin, Amniotin, and Progynon; also, the male sex hormone testosterone, thyroid extract, Antuitrin, Antuitrin S, and others. Daily doses of theelin for a few days, then twice weekly, has proven satisfactory in the majority of cases. Of late theelol by mouth once or twice daily has served to control symptoms and saves the patient the expense of visiting the doctor for hypodermics, which in themselves are disagreeable to some. In some instances large doses, 20,000 units, are indicated and the expense becomes a consideration of moment. Recently these estrogenic drugs have been prepared for oral administration; they are also given per vagina as suppositories or pessaries, and while larger doses are required the efficacy cannot be denied and quite a saving is had for the patient in time and money.

I am aware that considerable psychic influence may enter into disease and that any medicinal treatment may be of questioned benefit. We know some wonderful cures are claimed for Christian Science and Lydia E. Pinkham's Vegetable Compound, but I am convinced that endocrinology offers us the best and safest plan of therapy for this complaint. Personal interest by the physician in obtaining a complete history of each case; patience on his part while the patient relates her numerous symptoms and a careful physical examination of all these women will redound to the benefit of patient and doctor. Surely at this time of life there frequently are organic diseases of grave consequence unless discovered early and proper remedial measures instituted. Notably among these are cancer of the uterus, breast, vulva, cardiorenal disease with hypertension, and numerous others not connected in any way with the menopause but incident to this period of life.

Organotherapy is still in its infancy; we certainly have progressed in our knowledge of these drugs and know them to be of considerable benefit to a large number of these patients, but much remains to be learned about ductless glands, their secretions and just how they produce symptoms known to result from them. Therefore the dose of these organic drugs and how they act must be somewhat hazy for a time. We know that replacing the ovarian hormone which disappears with the menopause, affords great relief to numbers of distressed women, and I am certain the number so relieved is increasing with our knowledge of organotherapy and hormones. Our goal should be to endeavor to make this involutional period in woman's life one to be hailed with delight instead of a dreaded ordeal with years of discomfort. Too much surgery has been done upon menopausal women and too little attention paid them in the beginning of this troublesome time.

SUMMARY

1. Ovarian hormones make, and their absence may break, the woman.
2. Interrelation of the ovary, pituitary, thyroid, adrenals, pancreas and other ductless glands make possible a disturbance in all, when one ceases to function.
3. The menopause is the most likely time for this disruption to occur.
4. Because of the number of important structures involved a myriad of symptoms follow, varying from nil to insanity, making an invalid of the woman and baffling the doctor.
5. Therefore, the doctor must be a family physician, surgeon, gynecologist and psychiatrist, plus radiologist and roentgenologist.
6. Organotherapy offers the best and most conservative field for relief of this troublesome period.
7. Complications are common at this time with no hormonal connection; hence, the last word is, the menopausal woman should be examined early and often.

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ABNORMALITIES OF THE EYELIDS

While some eye defects can be inherited, abnormalities of the eyelids are rarely due to heredity, *Hygeia, The Health Magazine* states in reply to an inquiry. "Faults of diet, especially deficiency of vitamins during pregnancy, might cause eye defects, but such cases are almost unknown in this country," *Hygeia* says. "There is little reason to think that fright, or other shock during pregnancy, causes defects of the eye."

ENDOCRINES IN GYNECOLOGY AND OBSTETRICS WITH SPECIAL REFERENCE TO STILBESTROL IN THE TREATMENT OF UTERINE BLEEDING—ORIGINAL RESEARCH ON MENSTRUATION*

KARL JOHN KARNAKY, B. A., M. D.
HOUSTON, TEXAS

Uterine bleeding occurs after a number of procedures in women, usually following a latent period of five to seven days, namely: after removal of the corpus luteum, after bilateral oöphorectomy performed at any day of the cycle except the first three days, after spinal transection, after the injection of estrin, and after injection of corpus luteum. It has been suggested that corpus luteum has nothing to do with menstruation except to delay the normal period until it can prepare the endometrial bed for pregnancy.

The causes of normal menstruation have been suggested as follows: withdrawal of estrin;[1, 2, 5] withdrawal of progesterone (corpus luteum)[19] or an extra ovarian factor[15] or toxic sterols from ovarian metabolism;[18] withdrawal of an "x" (estrin) substance which temporarily disturbs the endometrium.

The causes of functional uterine bleeding are still theories. Those who advance these theories are Schroeder, who believes that a secretion of the follicular cysts causes the bleeding; Shaw, who believes that toxins act on the endometrium; Novak, who believes that there is an imbalance between the follicular stimulating and corpus luteum stimulating hormones; Hofbauer, who believes the bleeding is due to hyperfunction of the anterior pituitary; and Hamblen, who believes bleeding to be due to the refractivity of the ovaries. The author believes that all uterine bleeding, except mechanical bleeding, is due to an estrogenic hormonal bleeding level. Yet the ovaries produce the estrogens, the level of which still depends upon the effect of the metabolism of the estrogens by the liver, kidneys and uterus. We know that in functional uterine bleeding cases there is an absence of corpus luteum, yet in most cases if we give corpus luteum we increase the bleeding.

Hartman,[12] in 1934, observed that estrin will not always inhibit normal menstruation or bleeding if injections are begun after the middle of the cycle. Estrin does, however, inhibit normal menstruation if injections are begun before the middle of the menstrual cycle. However, it has been shown in our Menstrual Disorder Clinic at the Jefferson Davis Hospital that one can inhibit menstruation by giving large doses of estrin or stilbestrol, even if they are given after the middle of the cycle.

The anterior pituitary was ruled out by Hartman and Firor,[13] and posterior pituitary was ruled out by Smith, Tyndale, and Engle.[20] The stalk and pars tuberalis suffice to prevent diabetes insipidus. Atwell and Marimus found pressor substance in the stalk of the bovine pituitary. Yet Hartman and Geiling failed to produce menstruation by giving continuous large amounts of pituitrin. Markee failed to produce bleeding in his intra-ocular endometrial implants by large doses of pituitrin.

Attempts to prove that either the adrenals or the thyroid are the cause of menstruation have failed.

What then is the cause of menstruation or bleeding? The physiological change in the endometrium is the same whether a woman menstruates or bleeds; namely, constriction of the spiral arteries. Bleeding may occur from any type of endometrium; this fact has been shown by Hamblen and the author.

The research of Markee and Bartelmez and several others shows that the constant and essential events leading to menstruation are dehydration of the endometrium and extreme vasoconstriction of the spiral arteries of the endometrium for a period of from four to twenty-four hours preceding the bleeding. It is a vascular phenomenon. Only the upper two layers of the endometrium are desquamated. The basal layer has a separate blood supply and does not take part in menstruation.

Daron believes that the spiral arteries constrict near the junction of the endometrium and myometrium and that the basal layer has a separate artery supplying it.

At this point I should like to submit for consideration the author's theory as to the cause of menstruation or bleeding in women: There must be a certain estrogenic hormonal level in the blood before there is constriction of the spiral arteries and dehydration of the endometrium with subsequent bleeding or menstruation. This estrogenic hormonal level may cause constriction of the spiral arteries by direct contact because it has been shown that the capillaries over the entire body are more fragile during menstruation. (Soskin).

*In part from the Department of Gynecology, Menstrual Disorder Clinic, Jefferson Davis Hospital, Houston, Texas. Permission to do this research was granted by the Research Committee of the Jefferson Davis Hospital.

*Read before the Section on Obstetrics and Gynecology, State Medical Assocaition of Texas, Dallas, May 14, 1940.

*Stilbestrol was furnished for this research by E. R. Squibb & Company, 85 per cent; Parke, Davis & Company, 10 per cent; and Eli Lilly & Company, 5 per cent. Thanks are extended to these companies for their courtesy in supplying this efficient drug.

Incisions made during menstruation are known to bleed more. This hormonal level may also stimulate the parasympathetic and sympathetic nerves to the uterus and spiral arteries and so cause constriction of them. The bleeding seen two to four days following presacral sympathectomy may be explained in the following way: the spiral arteries constrict, and then dilate four to twenty-four hours later at which time there is bleeding. The uterine bleeding seen following a nervous shock may be explained in this way: the estrogenic level may also stimulate these nerves or the myometrium directly and so increase the tone of the uterine musculature.

To determine the exact amounts of estrogens in the blood and urine daily would be quite a task. I thought that I might throw some further light on the cause of menstruation or bleeding in women by the use of a definite known amount of estrogen by mouth. So a group of thirty menopausal women who had gone through their natural menopause from two to twenty-eight years were given daily, by mouth, 1.0 milligram of stilbestrol or the equivalent of 25,000 international units of estrone. It was observed that as soon as approximately 40 mg. (1,000,000 international units — lowest 36 mg., highest 46 mg.)—were taken they all began to bleed. If they were given 10, 15 or 25 mg. of stilbestrol, the bleeding stopped almost immediately and remained so as long as large doses were given. If they stopped taking the stilbestrol as soon as the bleeding began, they all stopped bleeding. If they continue to take 1.0 mg., they continue to bleed. Therefore, it appears from this observation that there must be an estrogenic level above or below which there is no bleeding. The patient is amenorrheic. The theory may be stated, "At a certain estrogenic hormonal bleeding level which varies in each individual and locality, a constriction of the spiral arteries of the endometrium occurs. This leads to anemia, dehydration, anoxemia, necrosis, and subsequently, bleeding or menstruation." The "free estrogens" level may be the important estrogens in producing bleeding or menstruation.

To further substantiate this hormonal bleeding level theory, twenty-five normal menstruating women were made amenorrheic and remained so as long as 10, 15 to 25 mg. of stilbestrol were given daily. The premenstrual endometrium underwent absorption and returned to the resting stage and later to the proliferative stage with or without dilated endometrial glands. Here we produced a physiological sterility.

Still further data were accumulated by giving stilbestrol to a series of twenty-five hypomenorrheic women who had not menstruated longer than from one hour to two days. Also twenty-five amenorrheic patients who had not bled from three months to three years were given 1.0 mg. of stilbestrol daily. These patients required 25, 20 to 15 mg. to produce bleeding. These individuals required less than 40 mg. required by the post-menopausal patients because they already had some estrogenic hormone in their blood and so required less to reach the estrogenic hormonal bleeding level.

Still further data were accumulated by giving large doses of stilbestrol to 112 patients with submucous leiomyomata and endometrial polyps associated with menorrhagia and metrorrhagia; and to 400 patients with functional uterine bleeding. Bleeding was stopped in the above conditions in from thirty minutes to twelve hours by giving 15 to 25 to 100 milligrams of stilbestrol or 20,000 to 30,000 rat units of progynon-B intramuscularly; the bleeding stopped almost immediately or within an hour if stilbestrol or progynon-B was injected into the anterior lip of the cervix. The patients did not bleed as long as large doses of stilbestrol were administered, such as 5 to 10 to 25 mg. daily. It should be noted that mechanical bleeding, such as retained placenta, etc., cannot be controlled with estrogens.

Twenty-six patients with leiomyomata uteri with associated menorrhagia were relieved of bleeding by taking 5 to 10 mg. of stilbestrol by mouth every night for three to six nights. Bleeding in myomatous patients can be controlled until they can be conditioned for an operation. Bleeding in myomata individuals is functional in 98% of the cases, because their bleeding stopped when estrogens were given.

Eight patients with adenocarcinoma of the uterus were controlled of flooding by 25 mg. intramuscularly and 5 mg. by mouth every night for twenty nights. One of these patients had had radium radiation because of flooding.

Twenty-seven patients who had had a dilatation and curettage in a hospital under gas anesthesia and who still bled were controlled of bleeding by stilbestrol or progynon-B therapy.

Therefore, a woman bleeds or menstruates only when the estrogenic hormones reach a certain blood level, regardless of the condition, size, position shape, or contents of the uterus. At any level above or below this the patient is amenorrheic. How, then, can we change the bleeding level? As Hamblen stated, "As a rule treatment which employs surgery, radium or x-ray is an admission of the defeat of specific endocrines." We can

remove the ovaries which will carry the level below the bleeding level with its subsequent ill effects with which we are all now so familiar. The surgeons have too long been removing and resecting ovaries which are normal in almost 97 per cent of the cases. The more I see surgeons operating on women, the more I believe we know less about the normal ovaries. I have personally examined approximately 500 ovaries, or sections of an ovary, grossly and miscroscopically, that were normal, yet they were removed because operators thought they were cystic. All normal ovaries are cystic. Rarely should we meddle with the ovaries and still less rarely should we resect or suture or remove an ovary. Ovaries are precious gifts to women and were not made for us to operate upon. We have caused fourteen cases of cystic ovaries to undergo absorption by giving 5 mg. stilbestrol every night for twenty nights. This is a simple and more scientific way to treat cystic ovaries. A solid or a dermoid cyst, which are rare, should be removed, but seldom do cystic ovaries need to be removed or operated upon. All matured ovaries become cystic and rupture spontaneously without someone operating on them.

Radiologists also treat women often for bleeding, especially at the menopause, stating that the ovaries are no longer of any use and that the patients have a malignancy of the uterus. Those endometriae the older physicians called adenocarcinoma were in most cases only hyperplasia of the endometrium. I have not seen a case of adenocarcinoma of the fundus at the menopause in Jefferson Davis Hospital during the past seven years in a clinic where we see nearly 10,000 women each year. The hormonal studies by myself and others have shown that it is almost impossible to have an adenocarcinoma of the fundus at the menopause because this condition occurs when the estrogenic hormones are at the adenocarcinoma estrogenic level, which is about five rat units per liter of urine, yet if a woman bleeds one year or more after her menopause then an adenocarcinoma is present in the greatest majority of these cases. An endometrial biopsy should always be taken and studied in all uterine bleeding cases except a known pregnancy. It has been shown that the ovaries function for from four to five years after the menses cease, so x-rays would destroy them in most instances completely.

Other less radical means are now shown to be better treatment than radiation for menopausal bleeding. They consist of raising the estrogenic level above the bleeding level, with stilbestrol or progynon-B and rarely, if ever, a hysterectomy. My advice to a physician who is to be a gynecologist is not to be surgical minded, because if he is, he will find many things he thinks should be corrected by the surgical knife and in so doing he will do harm in many instances.

In all these bleeding cases I have not had to do one dilatation and curettage in a hospital. All have been controlled of bleeding. In only about 10 per cent of the cases will there be any trouble in keeping them permanently cured. I am of the impression that in these cases there must be a granulosa cell or some solid ovarian tumor present. Ninety-five per cent of the difficult cases were of women who had had one or more ovaries removed or one or more ovaries resected or sutured or one or both tubes removed with resulting less blood supply to the ovaries. These ovaries are then only able to produce enough estrogen to reach the hormonal bleeding level, or the amount of estrogens now produced is so small that after they are metabolized by the uterus, liver and kidneys, the final estrogenic level is at the hormonal bleeding level.

In the menorrhagic cases, the administration of estrogens keeps the estrogenic level just above the bleeding level until the newly developing follicle in the ovary produces enough estrogens to keep the level above the bleeding level. It should be remembered that the level of estrogen in the blood is not a smooth curve as shown in the accompanying diagrams but a zigzag one.

The menstrual cycle throughout life is as follows: At eight years of age the ovaries begin to give off ovarian hormone, and the girl is amenorrheic until there is enough hormone in the blood to reach the hormonal bleeding level at which the first menstruation occurs. If ovarian metabolism is normal she has a normal menstruation; if abnormal she floods. If the follicles remain in the ovaries and ovulation is missed, there is an increase in follicular cysts, and the amount of estrogens given off reaches the bleeding level, and she bleeds.

After puberty the hormonal level rises above the bleeding level and approaches it at each menses. The ovarian hormone level in hypo- and oligo-menorrheic individuals is apparently below the bleeding level and a rise in estrogenic hormones has to occur to produce a flow.

During pregnancy the estrogenic hormones are above the bleeding level and that, in my opinion, is why a pregnant woman does not menstruate. I have given 15,000 to 50,000 rat units of anterior pituitary like hormone to three normal menstruating women and they menstruated as if they had had no A.P.L. hormone at all. So the placental hormone may not be the cause of amenorrhea during pregnancy. At delivery some of the bleeding is

hormonal in nature and some of it is mechanical. I have yet some work to do with corpus luteum.

At the menopause, if the metabolism of the estrogens is normal, the individual goes through the so-called change of life quietly and peacefully. Women usually end their menstrual life like it began at puberty. That is, they miss a month, skip one or two months, then menstruate again. An excessive menstruation is certainly no indication for the long used x-ray or radium radiation or surgery, which procedures have been much overdone. It should be remembered that the ovary lives on even after the menses cease. (Charts 1, 2, 3, and 4).

What is the primary cause of the uterine bleeding? It is the ovaries which give off the estrogenic hormones. If the patient is bleeding there are persistent follicles in the ovaries which give off a constant amount of estrogenic hormones, and this level is at the bleeding level. The amount of ovarian hormone produced by the ovaries varies from

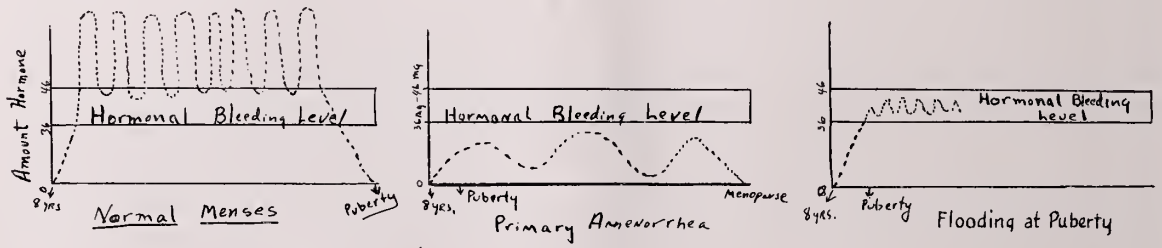


CHART 1

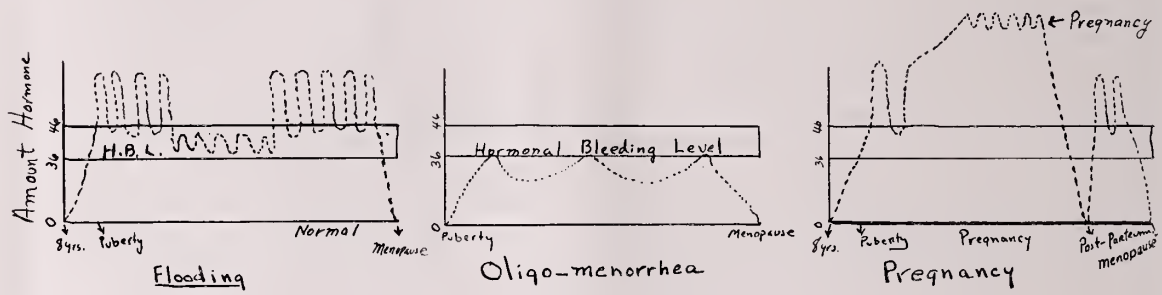


CHART 2

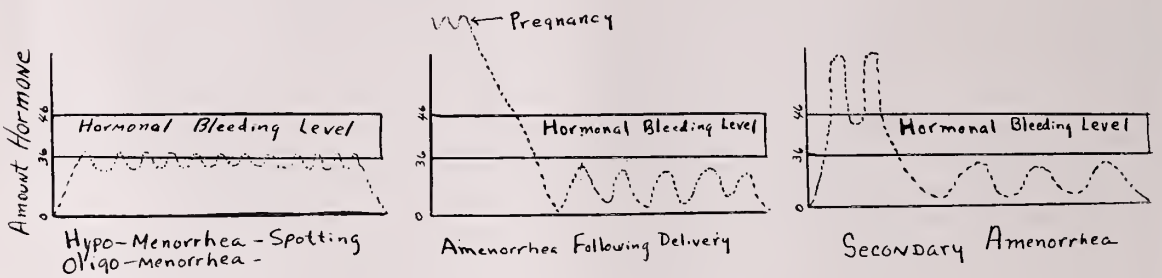
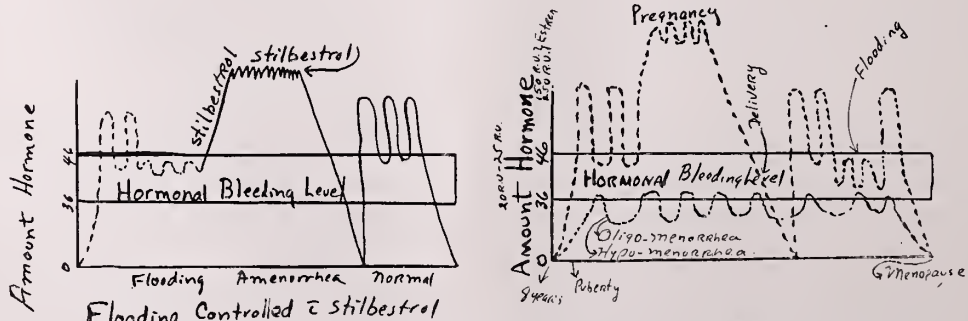


CHART 3



Composite chart of menstruation.—Author.

CHART 4

day to day and from hour to hour. The liver, uterus and kidneys also destroy varying amounts of these estrogens, namely estradiol and estrone, and also cause a lowering of the blood estrogenic hormones to the bleeding level. If a patient spots at each menses, the estrogenic hormone level is reached but is not retained very long. It is an in-and-out proposition, governed by the follicular output and liver and kidneys destruction (Heller, C. G.). It can be said "Good ovaries, normal menstruation, regardless of the size, position, shape, and contents of the uterus, bad ovaries, abnormal menstruation." We should not forget to treat the patient as a whole, with rest, iron and so forth. The general health should be built up. Endometrial biopsy should be taken in every uterine bleeding case with a Randall curette which is a simple office procedure. Tissue should be examined microscopically for malignancy.

STILBESTROL

It was with the use of stilbestrol that the author's theory of menstruation was derived. Stilbestrol has all the properties of the natural estrogens, yet it is entirely different structurally.

Stilbestrol is very reasonable in cost, is about as potent by mouth as when given per vagina, or as an ointment on the skin, or when given intramuscularly or subcutaneously.

From my extensive studies with stilbestrol I firmly believe that it is many times less toxic than sulfanilamide or sulfapyridine. There have been no fatalities nor near fatalities in the 600 patients treated by me or Dr. G. B. Thomas, resident in gynecology and obstetrics, at the Jefferson Davis Hospital, Houston, Texas.

Eighty-five per cent of the patients complained of a slight nausea four to six hours after 1.0 mg. or more of stilbestrol had been taken. The nausea usually lasted for thirty minutes to two hours. If the drug was taken at 9:00 o'clock in the evening, 75 per cent had only a very slight sickly feeling in the epigastrium on arising in the morning. Yet if patients eat bread and milk as soon as they get out of bed, this nausea is eliminated in approximately 60 per cent of the cases. If ketochol or any bile acid and salts is given three times a day with stilbestrol a great deal of the nausea is eliminated. Amphojel will also eliminate some of the nausea. NaOH and U.S.P. Lactic acid mixture will relieve most cases of their nausea. Most patients become tolerant to stilbestrol by the fourth day and they are no longer severely nauseated, but may be slightly nauseated from time to time.

Some surgeons do not advocate stilbestrol because some of their patients are nauseated. Yet these surgeons will take out a normal uterus under a general anesthetic just because a woman is bleeding. The patient really vomits from the anesthetic and in some cases die. He will also order ergot which produces a thousand times more discomfort from the constant nausea and severe vomiting it produces. He will also order sulfanilamide and sulfapyridine, and so forth, which give a much more severe reaction than stilbestrol.

In a series of two cases Dr. Tom Kennerly has shown that stilbestrol produces a hyperacidity of the stomach. Dr. W. S. Wysong advocates sodium lactate because of these findings. In eight cases of Dr. W. S. Wysong, following the work of Dr. Tom Kennerly, it was revealed that there was a very slight rise in acidity of the stomach, yet in some cases sodium lactate or alkalies relieved the patients of nausea.

TOXICITY OF STILBESTROL

Four hundred of our 600 patients had 1,867 laboratory studies before, during and after the administration of the stilbestrol. One patient received as high as 6,500 mg. and another 9,685 mg. without any changes in the laboratory studies.

The laboratory tests done were as follows: Icterus index, complete blood count, urinalysis, blood sugar, blood calcium, blood phosphorus, blood cholesterol, urea nitrogen, total nonprotein nitrogen, creatinine, blood sodium chloride, blood uric acid, blood sedimentation, blood Wassermann, red blood cells, hemoglobin, and Aschheim-Zondek. Not one of these tests changed from the control taken before the adminstration of stilbestrol. From the above laboratory data, I do not believe stilbestrol is toxic, and if so, very slightly.

Also the amount of nausea and exceptional vomiting is the same whether a patient takes 5 mg. or 100 mg. of stilbestrol at one injection. We now give intramuscularly, 15 to 25 to 100 mg. at one injection in 4 cc. of olive oil, into the anterior lips of the cervix, according to the severity of the bleeding.

CLINICAL DATA

We have treated the following cases: meno- and metrorrhagia 400; menopausal 75; normal menstruating women 25; dysmenorrhea 24; gonorrheal vulvovaginitis 17; therapeutic abortion 3; senile vaginitis 26; hypomenorrhea 37; amenorrhea 25; loss of libido 2; hypoplasia of the uterus 3; migraine of menses 10; adult vaginitis 12; painful breasts 4; acne of face 3; hypoplasia of breast 2; lactation 5; ovarian cysts 14; postpartum serosanguineous discharge 11; and pseudopregnancy 2.

The constant serosanguineous secretion which causes a great deal of annoyance in postpartum cases is treated by giving 5 mg. of stilbestrol by mouth each night for thirty nights. In twenty-four to forty-eight hours this secretion stops and they no longer have to wear a perineal pad. Stilbestrol absorbs the excess endometrial tissue and also helps to involute the uterus.

Pseudopregnant patients can be made to bleed by giving 1 milligram every night by mouth until they bleed. In cases of nausea of pregnancy we give 0.4 mg. of stilbestrol by mouth twice a day.

DOSAGES

The following doses are recommended:

Gonorrheal vulvovaginitis, 1.0 mg. daily for thirty days.

Senile vaginitis, 0.1 to 0.2 mg. daily for thirty days.

Amenorrhea, 1.0 mg. daily until they bleed, skip fourteen days and repeat.

Hypomenorrhea, 0.1 to 0.5 mg. daily for twenty-eight days, skip fourteen days and repeat.

Dysmenorrhea (uterine), 0.5 mg. daily, beginning fourteenth day of the cycle.

Pain of endometriosis at menses, same as for dysmenorrhea.

Menstrual migraine, 0.2 mg. daily, beginning fourteenth day of cycle or 5.0 mg. intramuscularly if patient comes for treatment during the menses.

Ill feeling of menses, 0.2 to 5 mg. daily, beginning fourteenth day of cycle.

Hypoplasia of uterus, 0.5 to 1 mg. daily for sixty days.

Menopause, 0.5 to 1 mg. daily or three times a day and as needed.

Uterine bleeding, menorrhagia, metrorrhagia, bleeding from the uterus with myoma (fibroid), and involutional melancholia, 5, 10, 15 to 25 milligrams at the first visit into the anterior lips of cervix, and 5 milligrams each night by mouth for from twenty to thirty nights, and 5 mg. every night for six nights when flow starts again, and as needed to check flow at the next three or four menstrual periods.

STILBESTROL EQUIVALENTS

0.1 mg.—2,500 International Units (I. U.) estrone.

0.2 mg.—	5,000 I. U.	0.8 mg.—	20,000 I. U.
0.3 mg.—	7,500 I. U.	0.9 mg.—	22,500 I. U.
0.4 mg.—	10,000 I. U.	1.0 mg.—	25,000 I. U.
0.5 mg.—	12,500 I. U.	2.0 mg.—	50,000 I. U.
0.6 mg.—	15,000 I. U.	3.0 mg.—	75,000 I. U.
0.7 mg.—	17,500 I. U.	4.0 mg.—	100,000 I. U.
		5.0 mg.—	125,000 I. U.

One does not have to use stilbestrol only. Progynon-B when given in 20,000 to 30,000 to 50,000 rat units intramuscularly followed by 10,000 rat units every other day or twice a day for ten to fourteen days will also control uterine bleeding. The use of various endocrines previously gave only symptomatic relief. Stilbestrol and progynon-B are the only drugs that relieve the cause of the bleeding by absorbing the cysts of the ovaries, which is the primary cause of uterine bleeding.

All patients are given one-fourth grain of thyroid every morning, which dose is increased one-fourth grain every fourth day until the tolerance dose is reached. This apparently helps to metabolize the estrogens and also sensitizes the ovaries to pituitary hormones. In the research described in this paper no thyroid was given.

In the dysmenorrheic cases we found that we could obtain better results in the married woman by injection of 1 cc. of 85 per cent ethyl alcohol into each frankenhauser ganglia on the lateral sides of the uterus. This is a simple office procedure and is more effective than all the hormones advocated for dysmenorrhea. Pyramidon (Winthrop) has been of a great use to me in the treatment of the young single girl with dysmenorrhea.

I have found stilbestrol and progynon-B very useful for checking the menses of the patient who has had a conization just prior to her cycle or in patients who begin to bleed on the day they are to get married. These drugs will delay the cycle until withdrawn.

One should examine the cervical canal in cases of spotting because I have frequently had such cases in which the patient menstruated normally but the cervical canal was stenosed so that the normal amount of menstrual blood required a longer time to get out of the uterus, so complained of spotting or irregular menses. Simple dilatation of cervix cures these.

Is stilbestrol a hormone seen only during pregnancy? It is my impression that stilbestrol may be a chorio-placental like hormone, present only during pregnancy because of the following reasons: There is a hypertrophy of the breast and also a production of the prominent tubercles of Montgomery, primary and secondary areola, and congestion of the breast. There are also all the sensations produced by pregnancy such as morning sickness, desire for certain foods, *et cetera*. The menstruation is also inhibited. The vagina, vulva, uterus, and cervical glands become markedly hypertrophied and blue. The ovaries become smooth and devoid of cysts and the patient increases in weight. In some cases following the injection of 25 mg. of stilbestrol, milk is produced in the breast. If the patient was very nauseated during her last pregnancy she will also be nauseated when taking stilbestrol. This is one check as to whether or not stilbestrol will cause nausea.

I believe that stilbestrol is an activator or a catalyst for the metabolism of the natural estrogens: estradiol, estrone and estriol. Stilbestrol may be one of the metabolic products of the natural estrogens.

I have never seen a case of fibrosis uteri with or without uterine bleeding and I doubt if any of us have ever seen a case, yet approximately 27 per cent of a series of 2,000

hysterectomies reviewed by me had such a diagnosis. This used to be a common diagnosis in our hospital as a cause of uterine bleeding. I have shown that there is no such cause for uterine bleeding.

SUMMARY

Menstruation and bleeding in women are due to an estrogenic hormonal bleeding level. This level varies in each individual and locality and is also governed by the liver, uterus and kidneys' destruction of the estrogens. When this level is reached the spiral arteries of the endometrium constrict, leading to ischemic necrosis and subsequent menstruation or bleeding. Uterine bleeding in women responds better to the administration of stilbestrol or progynon-B than to any method used by the author. Corpus luteum is not necessary. One can stop functional uterine bleeding quicker and more scientifically by giving from 10 to 25 mg. of stilbestrol or 20,000 to 30,000 to 50,000 rat units of progynon-B intramuscularly or into the anterior lip of cervix, followed by 5.0 mg. of stilbestrol every night by mouth for 20 nights or 10,000 rat units of progynon-B intramuscularly every other day for six to ten injections than by the dilatation and curettage of the uterus.

Women do not have to have radium, x-ray or surgery, or dilatation and curettement in a hospital because of a uterine bleeding. A simple Randall curette for use in the home, office or hospital is all that is necessary.

Good ovaries will cause normal menstruation regardless of the size, position, shape, or contents of the uterus; bad ovaries produce menstrual iregularities.

The ovaries are almost always the cause of the bleeding, not the innocent uterus as we formerly believed.

Leiomyomata are seldom the cause of uterine bleeding. The bleeding in myomata uteri is hormonal because the bleeding can be stopped in 98% of the cases by giving estrogens (progynon-B or stilbestrol).

Stilbestrol is not as toxic as many drugs commonly used.

We now can graph the menstrual irregularities.

Progynon-B, 20,000, 30,000 or 50,000 rat units into the anterior lip of cervix or intramuscularly with 10,000 rat units every day until bleeding stops and then 10,000 rat units every other day for six to ten injections is a far better way to treat functional uterine bleeding than any other method advocated in the literature.

Many thanks are due Dr. G. B. Thomas for his most excellent help in the Menstrual Disorder Clinic; Dr. D. H. Henderson for his interpretation of pathologic changes of the ovaries, uteri, endometrial and vaginal mucosa, and also for the laboratory reports; Dr. E. Stripling for her aid in compiling this paper; to all the internes, nurses and resident for the close coöperation and observation of the patients while stilbestrol was being given; to Miss Juanita Amason for her most excellent nursing assistance. This paper is the untiring effort of almost every one connected with the Department of Gynecology and Obstetrics, Jefferson Davis Hospital, Houston, Texas.

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326 Medical Arts Building.

ABSTRACT OF DISCUSSION

Dr. Minnie L. Maffett, Dallas: Probably no other subject in medicine has ben so intriguing to the medical profession since its earliest history as that of menstruation and the many theories evolved as to its causation. I have listened to Dr. Karnaky's

paper with a great deal of interest and can unreservedly commend his energy in doing the tremendous amount of work that has been necessary to reach the conclusions indicated in this paper. To accurately study from 400 to 600 patients in an Out-Patient Department in a modern city hospital with the hurly burly usually accompanying such service is an accomplishment.

Determination of the hormone content in the blood and urine of a sufficiently large number of patients upon which conclusions could actually be based on fact and not theory becomes, as the essayist has said, quite a chore. It is more than a chore—it is a long tedious piece of clinical research that can seldom be done by a worker actively engaged in clinical practice without an institution that furnishes an adequate amount of laboratory help. I hope that it will be possible for the essayist and others to make such studies in order that this theory of menstruation, if correct, may be taken into a more definite field of fact and not speculation. This, I feel, would be a very definite contribution in the future to gynecological progress. It would interest me to see such work done with controls treated by the hormones now in use along with this synthetic one. Some of the pharmaceutical houses have been good enough to furnish me with a supply of stilbestrol that, for many reasons, I have not been able to use extensively enough for a report to be conclusive. I have not, however, been able to obtain as universally good results as have been reported in this paper, and I think that is true of most investigators elsewhere. If in the future this drug, which should be comparatively cheap, proves to be as effective as claimed, a large part of the gynecological problems that have dogged the footsteps of the gynecologists for centuries will have been solved. I shall be watching the various reports with keen interest.

Dr. Karnaky (closing): I wish to thank those who have discussed my paper. We can now more clearly visualize and even draw sketches of the various menstrual irregularities. It gives me pleasure to give to the medical profession a quick, simple and scientific treatment for functional uterine bleeding. This method of treatment corrects the cause, namely, it brings about an absorption of the persistent follicular cysts of the ovaries. The various other methods of treatment with hormones heretofore used did not correct the cause so that the bleeding soon returned. A dilatation and curettage is not indicated because bleeding may occur from any type of endometrium or the endometrium may have nothing to do with the bleeding. With stilbestrol or progynon-B therapy the ovaries undergo atrophic changes and become smooth and free of persistent follicular cysts with resultant cure in approximately 90 per cent of the cases. Two to eight days after discontinuing the therapy normal bleeding occurs.

RARE CASE OF FUNGOUS INFECTION

A unique and rare case of a fungous infection of the membrane enveloping the heart is cited by Henry Joachim, M. D., and Silik H. Polayes, M. D., Brooklyn, in *The Journal of the American Medical Association* for July 20.

The case is rare in that it is the first to be reported and also one in which a diagnosis was made during life. Its history of infection is unique because the fungous organism was accidentally self injected by a morphine addict. The yeastlike fungus, Monilia, was found in the container in which the morphine was kept. The victim took no antiseptic precautions with the daily injections.

The fungus was isolated in the blood stream on eleven occasions before the patient's death. At autopsy there was hardly an organ or body cavity not showing the ravages of the fungus.

AN EVALUATION OF IODIZED OIL AS A THERAPEUTIC AGENT IN THE TREATMENT OF BRONCHIAL ASTHMA*

GEORGE J. SEIBOLD, M. D.
WICHITA FALLS, TEXAS

Iodized oil has been a valuable adjunct to the diagnostician since its first report by Sicard and Forrestier[13] in 1922; particularly is this true in the diagnosis of pulmonary disease. As a therapeutic agent, however, it has met with little success. It is well accepted that many cases of bronchiectasis are considerably improved by its routine administration, but in the treatment of the average asthmatic patient, it has been generally discarded.

The first reports that appeared early in the thirties were very enthusiastic and loud in its praise. Some even went so far as to state than even sensitivity was altered, and lauded it as a panacea for the intractable type of asthma. If we stop for a moment and review the early reports we will find that the period of time, the number of patients treated and the end results are anything but convincing.

It is recognized that in asthmatic patients there are many instances of improvement or cessation of symptoms without therapy. Many patients are free from symptoms after a good night's rest, so let us consider some of the factors that may have brought about the early enthusiastic reports. Taylor[14] in 1932 reports two cases; Fink[8] reviews twelve cases (1932); Anderson[2] observed sixty patients (1932); and Allison[1] was greatly impressed by its use in ten asthmatics (1933). One hundred cases are reviewed by Balyeat[5] and Seyler in 1934, and their knowledge of how the agent works was only problematical. To quote the last mentioned authors:

"It 'probably' acts: (1) As a lubricating agent in the small bronchioles thereby preventing the formation of plugs. (2) By coating over the mucous membrane of the bronchial tree, thereby protecting it from the irritation substances to which it is specifically sensitive. (3) Coating over the mucous membranes would also protect it in a similar way as a bland oil would a burn. (4) In those cases in which there is a superimposed bacterial infection, or in those complicated with bronchiectasis, the oil apparently replaces the infectious material and allows the patient to cough up the purulent material, thereby preventing absorption of toxins. (5) While the oil is not a bactericidal agent, it has been shown by Ochsner that there is considerable reduction of bacterial content of the sputum of those in whom it is used."

One of these same authors,[4] however, now compares iodized oil to "the surgeon's scalpel

*Read before the Texas Allergy Association, Dallas, May 13, 1940.

in chronic septic surgical cases" as a means of drainage.

Let me point out that the early treatment by oil was a hospital procedure; there was preoperative medication; anesthetic agents were used, and administration of epinephrin was generous. The removal of an asthmatic patient from his own environment may in itself relieve the paroxysms of wheezing; therefore the hospital is an "ideal" site for this therapy. Various forms of sedation were employed to relax the patient and it is accepted by all that the cocaine type of topical anesthetics frequently produce mild euphoria, and thus with the hospitalization and idea in mind that the patient is having something dramatic introduced into his therapy, the psychological factor is completely cared for. Criep[6] points out how an emotional girl was benefited, but no oil could be shown in the bronchial tree by x-ray. This has been observed in several patients, especially in one individual who in eight months had swallowed the oil at weekly intervals, as demonstrated by a roentgenogram immediately after each treatment.

The epinephrin therapy in some of the reported cases is in itself enough to aid materially. In the thirteen cases reported by Fink[8], nasal surgery was the major factor in over 90 per cent, because in all of these, foci of infection were removed or drainage established. The follow-up data on this group were lacking in the original report.

In contrast to these so-called good reports there have appeared in the literature more numerous reports of untoward reactions from the intratracheal use of iodized oil. Rowe[12] Fuchs,[10] Waldbott,[15] Flamm,[9] Criep and Hampsey,[7] and the Conference on therapy,[16] have condemned its use. Moore,[11] in 1939, lists more contraindications to the use of oil than the earlier authors. They are given in table 1. If the contraindications listed by Moore are closely regarded there will be little indication for its use.

TABLE 1.—*Contraindications to the Use of Iodized Oil. (After Moore.[11])*

1.	Active pulmonary tuberculosis.
2.	Reduced vital capacity of the lungs.
3.	Acute pulmonary infections.
4.	Foreign bodies.
5.	During an attack of acute asthma.
6.	Cardiac weakness.
7.	Late bronchial malignancy.
8.	Sensitivity to iodine.
9.	Sensitivity to poppy seed oil.
10.	Extremes of life.

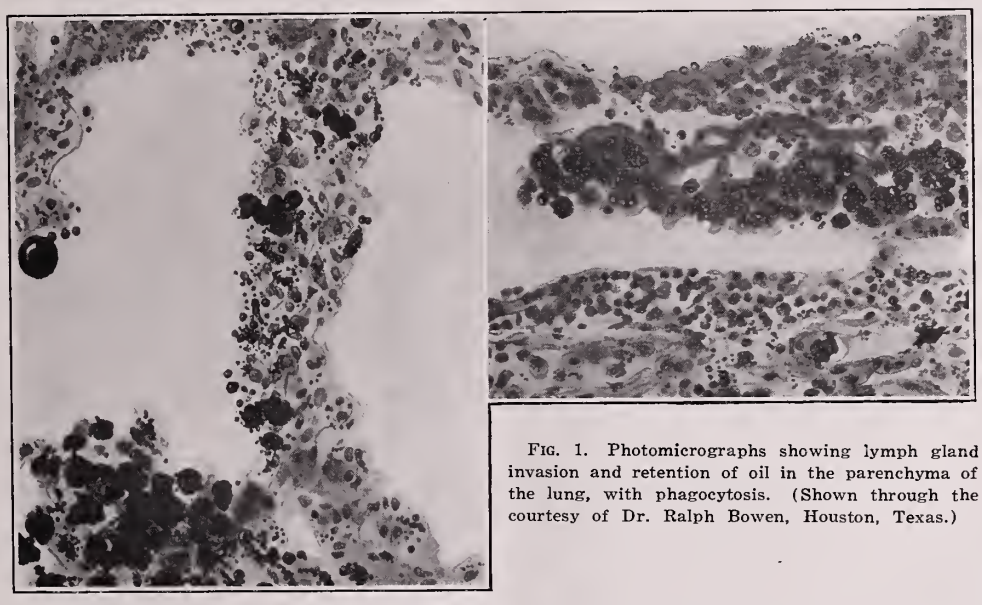

FIG. 1. Photomicrographs showing lymph gland invasion and retention of oil in the parenchyma of the lung, with phagocytosis. (Shown through the courtesy of Dr. Ralph Bowen, Houston, Texas.)

Since there have been repeated instillations of oil, we are seeing patients with retained oil that has been in the lungs for several years. I recall one patient who had the opaque media in both lungs after forty months, and there had been only one instillation.

The accompanying photomicrographs demonstrate how the oil itself has become a foreign body and show phagocytosis of the oil in the lungs, proving that it is definitely not a 100 per cent safe procedure and should not be calling on the defensive mechanism of the body. Flamm[9] has shown that lipophages come from connective tissues and not from epithelial tissues. He also shows that iodine is liberated or there would be no iodine reaction.

Pneumonia has been produced by other lipoids, and I have seen three definite bronchopneumonias in the same hospital at the same time due to the use of iodized oil.

Spontaneous pneumothorax,[10] chronic infection,[16] iodism, lipoid pneumonia and death[6] are untoward reactions that cannot be passed over lightly, and are definite reasons enough to condemn the routine use of this procedure. Its use should by all means not be left up to the discretion of the patient, and it should be administered by a physician and not the patient.

Next to Balyeat, Anderson[3] is probably the most enthusiastic about iodized oil. I should like to quote the latter author, pointing out two statements by him: "Treatment is a safe procedure and produces neither an immediate nor remote damage to lungs" . . . . "dyspnea follows and may produce an acute collapse of the lung." "There may be chill, rise in temperature, increase in pulse and pain in the area injected."

In a review of 641[4] cases, the exact statistical figures of results obtained are not listed in percentages; neither does it point out that this group of patients were "*selected*" from the files. I personally reviewed these histories, and I was not the person who selected them for study. Not included in the article, but purely from a personal viewpoint, I made a summary of the deaths for this same period, and some startling findings were disclosed. This summary showed the following: three asthmatic deaths in 1934; four in 1935; eight in 1936 and thirty-seven in 1937, the greatest increase being in the group that received oil. The mean death rate was five per year until 1937, and then, due to the indiscriminate use of oil, there was an increase of 500 per cent. I believe these figures speak for themselves, because other allergists did not experience this sudden increase in mortality.

Articles appearing in the past three years have condemned this procedure. I should like to quote three authors in closing:

"This treatment is too often indiscriminately used in asthma."[15]

Second,

"The instillation of 'iodized oils' is a therapeutic procedure for asthma that is fast losing ground. The more we see it used the more impressed we are with its dangers, namely, localized lipoid pneumonia and chronic infection set up about the point where iodid in oil remains in the bronchial tree."[16]

And last,

"Recently the intratracheal instillation of iodized oil has been advised in most cases of resistant asthma. When retained mucus may be exaggerating the symptoms, such oil may be required, though with proper treatment directed against existing allergenic causes, the asthmatic symptoms are usually so well controlled that the bronchial mucus is gradually expectorated. Moreover the necessity of repeated instillations of iodized oil usually indicates that undiscovered or uncontrolled allergies demand further study and treatment."[12]

CONCLUSIONS

A 500 per cent increase in deaths for a twelve months period, and three acute pneumonias in one week is convincing evidence that iodized oil is a poor therapeutic agent in asthma, and is accompanied by serious reactions. A review of the recent literature generally condemns its use. The editor of *The Journal of the A. M. A.* stated recently that it is a procedure being discarded even by its most enthusiastic advocates.[17]

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15. Waldbott, G. L.: Emergency Treatment in Asthma (Asthmatic Crisis), J. A. M. A. 110:1423-1427 (April 30) 1938.
16. Conferences on Therapy: Use of Drugs in Treatment of Allergic Conditions, J. A. M. A. 112:1335-1339 (April 8) 1939.
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Hamilton Building.

MISCELLANEOUS

COMING MEETINGS AND CLINICS

State Medical Association of Texas, Fort Worth, May 12-15, 1941. Dr. Preston Hunt, Texarkana, President; Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth, Secretary.

American Medical Association, Cleveland, 1941. Dr. Nathan B. Van Etten, New York, President; Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Southern Medical Association, Louisville, Kentucky, November 12-15, 1940. Dr. Arthur T. McCormack, Louisville, Kentucky, President; C. P. Loranz, Empire Building, Birmingham, Alabama, Secretary-Manager.

Texas Allergy Association, Fort Worth, May 12, 1941. Dr. Boen Swinny, Medical Arts Building, San Antonio, President; Dr. Homer Prince, Medical Arts Building, Houston, Secretary.

Texas Ophthalmological and Otolaryngological Society, Fort Worth, December, 1940. Dr. J. W. Ward, Greenville, President; Dr. Dan Brannin, Medical Arts Building, Dallas, Secretary.

Texas Radiological Society, Sherman, January 18, 1941. Dr. Jerome H. Smith, San Angelo, President; Dr. L. W. Baird, Temple, Secretary.

Texas Club of Internists, Boston, October, 1940. Dr. Carl Lovelace, Waco, President; Dr. George Herrmann, Medical College, Galveston, Secretary.

Texas Association of Obstetricians and Gynecologists. Marlin, Oct. 5, 1940. Dr. H. Reid Robinson, Galveston, President; Dr. Julius McIver, 1314 Medical Arts Building, Dallas, Secretary.

Texas Pediatric Society, Galveston, Oct. 5, 1940. Dr. T. A. Tumbleson, Beaumont, President; Dr. Frank Lancaster, 4409 Fannin Street, Houston, Secretary.

Texas Neurological Society. Dr. Wilmer Allison, Fort Worth, President; Dr. Melbourne J. Cooper, Nix Professional Building, San Antonio, Secretary.

Texas Railway and Traumatic Surgical Association. Fort Worth, May 12, 1941. Dr. G. V. Brindley, Temple, President; Dr. Ross Trigg, First National Bank Building, Fort Worth, Secretary.

Texas State Pathological Society. Dr. Geo. T. Caldwell, Dallas, President; Dr. M. D. Bell, 1109 Medical Arts Building, Dallas, Secretary.

Texas State Heart Association, Fort Worth, May 12, 1941. Dr. Joseph Kopecky, San Antonio, President; Dr. V. E. Schulze, San Angelo, Secretary.

Texas Dermatological Society, Dallas, Oct. 13, 1940. Dr. W. A. Smith, Beaumont, President; Dr. Duncan O. Poth, 1230 Nix Professional Building, San Antonio, Secretary.

Texas Surgical Society, Houston, Oct. 7-8. Dr. Walter Stuck, 1426 Nix Professional Building, San Antonio, Secretary.

Texas Orthopedic Society, Fort Worth, May 12, 1941. Dr. W. B. Carrell, Dallas, President; Dr. Ruth Jackson, Medical Arts Building, Dallas, Secretary.

Texas Association of Medical Anesthetists, Fort Worth, May 12, 1941. Dr. Thomas H. Compere, Houston, President; Dr. R. A. Miller, 1415 Nix Professional Building, San Antonio, Secretary.

Texas Society of Gastro-enterologists and Proctologists, Fort Worth, May 12, 1941. Dr. M. O. Rouse, Dallas, President; Dr. Tom E. Smith. 1207 Medical Arts Building, Dallas, Secretary.

Texas Mental Hygiene Association. Dr. Paul White, Austin, President; Dr. Evelyn M. Carrington, Huntsville, Secretary.

Texas Tuberculosis Association. Dr. E. G. Faber, Tyler, President; J. W. Butler, Galveston, Secretary.

Texas Public Health Association, Fort Worth, Oct. 7-9, 1940. Dr. J. W. E. H. Beck, De Kalb, President; Mr. P. A. Kerby, State Department of Health, Austin. Secretary.

Second District Medical Society, Abilene, Nov. 1 and 2. Dr. W. V. Ramsey, Abilene, President; Dr. W. T. Sadler, Merkel, Secretary.

Third, Panhandle, District Medical Society, Lubbock, Oct. 8-9, 1940. Dr. F. A. White, Childress, President; Dr. H. H. Latson, 301 Polk St., Amarillo, Secretary.

Fourth District Medical Society, Ballinger, Oct., 1940. Dr. J. P. Anderson, Brady, President; Dr. O. H. Chandler, Ballinger, Secretary.

Fifth and Sixth, Southwest District Society, Laredo, 1941. Dr. T. E. Christian, San Antonio, President; Dr. W. W. Bondurant, Jr., 1512 Nix Professional Building, San Antonio, Secretary.

Seventh, Austin District. Dr. Joe A. Shepperd, Burnet, President; Dr. A. L. Nanny, Marble Falls, Secretary.

Eighth, Ninth and Tenth District Medical Society, Houston, 1940. Dr. Walter D. Brown, Beaumont, President; Dr. A. A. Ledbetter, Medical Arts Building, Houston, Secretary.

Eleventh District Society, Palestine, Oct., 1940. Dr. Clayton Shirley, Tyler, President; Dr. C. C. McDonald. Tyler, Secretary.

Twelfth, Central Texas District Society. Dr. Dan Warren, Waco, President; Dr. R. K. Harlan, Temple, Secretary.

Thirteenth, Northwestern District Society, Wichita Falls, September 10, 1940. Dr. Tom Bond, Fort Worth, President; Dr. J. Edward Johnson, Mineral Wells, Secretary.

Fourteenth District Society, Greenville, Dec., 1940. Dr. Ira L. Thomas, Gainesville, President; Dr. R. S. Usry, 1835 Garrett, Dallas, Secretary.

Fifteenth, Northeast District Society, Texarkana, Oct. 8, 1940. Dr. Hugh M. Ragland, Gilmer, President; Dr. J. N. White, Texarkana, Secretary.

CLINICS

Fort Worth Medical and Surgical Clinics, Fort Worth, September 24. Dr. Sim Hulsey, Chairman, Clinic Committee.

Dallas Southern Clinical Society Conference, Dallas, March 17-20, 1941. Dr. Everett C. Fox, Medical Arts Bldg., Dallas, President; Dr. C. H. Warren, 1133 Medical Arts Bldg., Dallas, Secretary.

TEXAS DERMATOLOGICAL SOCIETY MEETING

The Texas Dermatological Society will hold a joint meeting with the Oklahoma State Dermatological Society at Dallas October 13. The morning session will consist of presentation of cases at Baylor University Clinic. Following a luncheon at the Dallas Athletic Club, the afternoon session will be devoted to a discussion of clinical cases. Dr. W. A. Smith of Beaumont is president, and Dr. D. O. Poth of San Antonio is secretary, of the Texas Dermatological Society.

NORTHEAST TEXAS DISTRICT SOCIETY MEETING

The Northeast Texas (Fifteenth) District Medical Society will meet October 8, at Texarkana, reports Dr. J. N. White, Texarkana, Secretary. The following scientific program will be presented:

Treatment of Diarrhea in Infancy and Childhood—Ben Andres, M. D., Longview.
(Discussion opened by C. E. Kitchens, M. D., Texarkana.)

Some Observations on Malaria and Its Treatment—J. F. McVeigh, M. D., Fort Worth.
(Discussion opened by Richard G. Granberry, M. D., Marshall.)

Acute Abdomen—William Hibbits, M. D., Texarkana.
(Discussion opened by Robert Y. Lacy, Pittsburg.)

Early Diagnosis of Pregnancy—C. R. Hannah, M. D., Dallas.
(Discussion opened by R. C. Cross, M. D., Texarkana.)

The Use of Sulfanilamide Derivatives in Acute Infections—Walter G. Reddick, M. D., Dallas.
(Discussion opened by Don J. Jenkins, M. D., Daingerfield.)

Laryngo-Tracheo-Bronchitis—A. W. Roberts, M. D., Texarkana.
(Discussion opened by V. R. Hurst, M. D., Longview.)

Practical Points in the Treatment of Gonorrhea in the Male—R. K. Womack, M. D., Longview.)
(Discussion opened by William A. Taylor, M., D., Mt. Pleasant.)

Clinical Pathological Conference—Hugh M. Ragland, M. D., Gilmer.
(Discussion opened by George W. Parsons, M. D., Texarkana.)

A luncheon will be held at noon, at which time Dr. Holman Taylor, Fort Worth, Secretary of the State Medical Association, will speak on the subject, Medical Preparedness.

Dr. Preston Hunt, Texarkana, President of the State Association will also deliver an address.

Dr. C. A. Smith, Texarkana, Councilor of the Fifteenth District, will give a report on matters of interest in the district.

The ethical reputable medical profession of the State is cordially invited to attend this meeting.

UNITED STATES CIVIL SERVICE EXAMINATIONS

The United States Civil Service Commission has announced open competitive examinations to fill medical officer positions in the United States Public Health Service and Food and Drug Administration, Federal Security Agency; Veterans Administration; Civil Aeronautics Authority, Department of Commerce; and Indian Service, Department of the Interior.

The examinations cover three grades with salaries ranging from $3,200 to $4,600, subject to a deduction of 3.5 per cent toward a retirement annuity. Applications must be filed with the United States Civil Service Commission, Washington, D. C., and will be rated as received until further notice.

Applicants must have been graduated with an M. D. degree from a recognized medical school, and must have had professional experience in one of the following optional branches: Aviation medicine; cancer research; cardiology; dermatology; eye, ear, nose, and throat (singly or combined); general practice; industrial medicine; internal medicine and diagnosis; medical pharmacology; neuropsychiatry; pathology, bacteriology, and roentgenology (singly or combined); public health; surgery; tuberculosis; and urology. For some positions in the Veterans Administration applicants for associate medical officer, paying $3,200 a year, need not have had experience other than one year of interneship. Applicants for the associate grade must not have passed their fortieth birthday, and for the other two grades they must not have passed their fifty-third birthday.

Further information regarding the examinations, and the detailed requirements, are given in the formal announcement. Announcements and application forms may be obtained from the Secretary of the Board of U. S. Civil Service Examiners at any first- or second-class post office, or from the U. S. Civil Service Commission, Washington, D. C.

U. S. SUPREME COURT HAS NOT RULED MEDICINE IS A TRADE

"Recently a widely circulated publication has asserted that the Supreme Court of the United States has definitely decided that the practice of medicine is a trade within the meaning of the Sherman Anti-Trust Law of the United States. Such a statement is not correct," *The Journal of the American Medical Association* for July 20 declares in an editorial.

"The facts are as follows: On July 26, 1939, the District Court of the United States for the District

of Columbia sustained the demurrer of the defendants to the indictment in this case and dismissed the charge against the defendants. The government appealed this ruling to the United States Court of Appeals for the District of Columbia. On March 4, 1940, the Court of Appeals filed its opinion reversing the decision of the District Court and remanded the case to the District Court for a trial on the merits of the indictment. Thereupon the defendants petitioned the Supreme Court of the United States to grant a writ of certiorari to review the decision of the Court of Appeals. The United States filed its brief and argument in opposition to the petition of the defendants for a writ of certiorari and therein asked the Supreme Court of the United States not to review the decision of the Court of Appeals at this time because the government argued that the judgment of the Court of Appeals was not final and the Supreme Court ought not review this case until after a trial was had and all the facts appeared in the record. In its brief the government conceded that the question whether the practice of medicine was a trade was a novel one of sufficient importance for the Supreme Court of the United States to settle but urged that this question be not settled by the Supreme Court of the United States until after a trial of the case, when all the facts would fully appear of record. Apparently the Supreme Court of the United States accepted the argument and suggestion of the government and declined to review the decision of the Court of Appeals at this time.

"The fact that the Supreme Court of the United States declined to review the decision of the Court of Appeals at this time does not mean, as all lawyers know, that the Supreme Court of the United States approved the opinion of the Court of Appeals but means only that for the present the Supreme Court of the United States is satisfied with the action of the Court of Appeals in sending the case back to the District Court for a trial on the merits. If the result of such a trial should be adverse to the defendants, the question whether the practice of medicine is a trade within the meaning of the language used in the Sherman Anti-Trust Law would still be an open question for the Supreme Court of the United States to decide. The Supreme Court of the United States has not yet decided that the practice of medicine in the District of Columbia is a trade within the meaning of the language of the Sherman Anti-Trust Law."

PHYSICIANS NEEDED FOR ARMY SERVICE

The physician, like every other American, has become actively interested in our national security and stands ready to contribute his services as required for military preparedness.

The immediate problem in this connection is one that concerns the War Department, and primarily the young physician. The War Department must procure sufficient additional personnel from the medical profession to augment the medical services of the Regular Army as the various increases are made in the strength of the Regular Army, as authorized by Congress to meet the partial emergency. The young physician is especially concerned because it is usually advantageous, and is often more convenient for him to serve with the Army.

Present plans of the War Department are designed to make service attractive and instructive for the young physician. If the physician holds a Medical Corps Reserve commission he can be ordered to active duty if he so requests. If he does not hold a commission, but is under 35 years of age and is a comparatively recent graduate of an accredited school, he may secure an appointment in the Medical Corps Reserve for the purpose of obtaining extended active duty for a period of one year or longer. Duty is given at General Hospitals, Station Hospitals, and with Tactical Units, and embraces all fields of general and specialized medicine and surgery. Excellent post-graduate training is obtainable in connection with Aviation Medicine. After serving six months of active duty in the continental United States, a Reserve officer may request duty in Hawaii, Panama, or other United States territories and possessions. The initial period for duty is for one year and yearly extensions are obtainable thereafter until the international situation becomes more clarified and our domestic military program becomes stabilized.

Many young doctors who have served with the Army on extended active duty have taken the competitive examination for entrance into the Medical Corps of the Regular Army. Extended active duty affords an excellent opportunity for the physician to observe modern military medicine and the facilities that exist for a complete and comprehensive medical practice.

Pay is according to rank, and, including subsistence and quarters allowances for an officer with dependents, amounts to an annual sum of $3,905 for a Captain and $3,152 for a First Lieutenant; or, without dependents, to an annual sum of $3,450 for a Captain and $2,696 for a First Lieutenant. In addition, reimbursement is made for travel to duty station and return.

Further information may be obtained by writing to The Surgeon General, U. S. Army, Washington, D. C.

LIBRARY NOTES

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Requests for packages should be addressed "Library, State Medical Association of Texas, 1404 W. El Paso Street, Fort Worth, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Only one package may be borrowed at a time, and packages are allowed to remain in the hands of the borrower for 14 days.

Package Service

Packages were mailed to the following from the Library of the State Medical Association during August:

Dr. A. G. Barsh, Stephenville—*Breast, pain* (5 articles).

Dr. R. S. Fillmore, Jacksboro—(1 journal).

Dr. Neill Simpson, Waco—*Pneumothorax* (8 articles).

Dr. Otto C. Egdorf, Wichita Falls—(1 book).

Dr. F. J. L. Blasingame, Wharton—(1 article).

Dr. C. J. Koerth, San Antonio—*Monilia* (2 articles).

Dr. J. A. Heyman, Wichita Falls—(1 journal).

Dr. E. C. Stoeltje, Rosebud—*Typhoid, therapy* (9 articles).

Dr. Fred Harrell, Olney—*Forearm, fractures* (20 articles).

Miss Lois Smason, Karnes City—*Speech, defects* (16 articles).

Dr. Chas. A. Shoultz, Bay City—(1 journal).

Dr. C. R. Cockrell, Baird—*Back, wounds and injuries* (13 articles); *Cancer* (14 articles).

Dr. Marion R. Lawler, Mercedes—*Empyema, therapy* (26 articles).

Dr. C. R. Finnegan, Dallas—*Paralysis, agitans* (15 articles).

Dr. T. P. Frizzell, Knox City—*Relapsing Fever* (20 articles).

Dr. Frank C. Hodges, Abilene—*Spine, curvature* (1 article).

Dr. Corinne Westphal, Yorktown—*Migraine* (18 articles); (1 book).
Dr. Loraine L. Allums, Kilgore—*Intestines, diseases* (20 articles).
Dr. Chas. A. Smith, Texarkana—*Undulant Fever* (28 articles).
Dr. W. E. Whigham, McAllen—*Nurses and Nursing* (6 articles).
Dr. H. E. Chandler, Mount Vernon—*Vitamins B and K* (11 articles); *Goiter, Exophthalmic, therapy* (12 articles).
Dr. C. G. Brindley, Cameron—*Eczema, in infants and children* (24 articles).
Dr. W. E. Ryan, Midland—*Elbow, fractures* (15 articles).
Mrs. Joe B. Foster, Houston—*Life, duration* (14 articles).
Dr. H. B. Eisenstadt, Port Arthur—*Diabetes Mellitus, complications and sequels* (17 articles).
Dr. M. D. Hanson, Huntsville—*Neurosyphilis, therapy* (12 articles).
Dr. O. J. Juhl, Jr., Vernon—(3 journals).
Dr. B. B. Griffin, Graham—*Pregnancy, extrauterine* (22 articles).
Dr. Margaret Alexander, Taylor—(1 book).
Dr. C. D. Stewart, Corpus Christi—(2 journals).
Dr. T. C. Cole, Huntsville—(3 journals).
Dr. Robert F. Thompson, El Paso—*Testicles, tumors* (22 articles).
Dr. Roy G. Hallum, Brownwood—*Leukemia, lymphatic* (29 articles).
Dr. J. Edward Johnson, Mineral Wells—*Jaundice* (10 articles).
Dr. Hugo J. Streider, Moulton—*Obesity, therapy* (16 articles).
Dr. H. T. Safford, El Paso—*Anus, imperforate* (9 articles).
Dr. O. H. Chandler, Ballinger—*Suprarenals, insufficiency* (11 articles).
Dr. Stewart Cooper, Abilene—*Urinary Tract, calculi* (5 articles).
Dr. Heinrich Lamm, La Feria—*Varicose Veins, therapy* (3 articles).
Dr. Oscar Huff, Mason—*Ulcers, therapy* (22 articles).
Dr. M. C. Carlisle, Waco—*Meningitis, pneumococcic* (17 articles).
Dr. Thomas E. Cook, Dallas—*Cancer, prevention* (22 articles).
Dr. T. D. Young, Roscoe—(1 journal).

Accessions

Macmillan Company, New York—Van Blarcom: Getting Ready to Be a Mother, 4th edition.
Charles C. Thomas, Publisher, Springfield, Illinois—Hawley and Maurer-Mast: Fundamentals of Nutrition.
C. V. Mosby Company, St. Louis—McGuinga: Applied Pharmacology.
W. B. Saunders Company, Philadelphia—Major: Physical Diagnosis, 2nd edition; Cecil: Textbook of Medicine, 5th edition.
Harcourt, Brace & Company, New York—Hugh Young: A Surgeon's Autobiography.
University of Chicago Press, Chicago—Moorman: Tuberculosis and Genius.
Williams & Wilkins, Baltimore—Rogers & Muir: Leprosy, 2nd edition.
American Medical Association, Chicago—The Vitamins, 2 copies.

Summary

Reprints received, 1,266.	Local users, 45.
Journals received, 157.	Borrowers by mail, 43.
Items consulted, 217.	Packages mailed out, 46.
Items taken out, 102.	Items mailed out, 531.

Total Items Consulted and Loaned, 850.

MEDICINAL REMEDIES

PROPAGANDA FOR REFORM

Digitalis for Obesity.—Too much publicity has apparently been given to the reports of a method of weight reduction which involves administration of digitalis for suppressing the appetite. Whether or not digitalis can produce a loss of appetite without harmful effects is debatable. The work of Hatcher and Weiss in particular has shown that the nausea produced by digitalis is a reflex the sensory organ for which does not appear to be located in the heart. Thus the type of nausea which digitalis produces is at least partly due to factors other than gastric irritation. Indeed, nausea and vomiting are toxic symptoms of digitalis and constitute a warning to decrease or stop the administration of the drug. Confirmatory evidence for this method of reducing body weight is lacking. The method cannot be generally recommended unless its efficacy and safety have been thoroughly demonstrated by carefully controlled observations.—*J. A. M. A.*, June 8, 1940.

"Sulfathiazole" and "Sulfamethylthiazole" the Nonproprietary Names for 2-Sulfanilamidothiazole and 2-Sulfanilamido-4-Methylthiazole.—The Council on Pharmacy and Chemistry reports that the terms "sulfathiazole" and "sulfamethylthiazole" are acceptable to Dr. Fosbinder, who is credited as the discoverer of 2-sulfanilamidothiazole and 2-sulfanilamido-4-methylthiazole. Inquiry was also made of Dr. E. J. Crane, chairman of the Committee on Nomenclature of the American Chemical Society, who also informed the Council that, in his opinion, there was no objection to offer to these nonproprietary names. Accordingly, the Council adopted the recommendation of its Committee on Nomenclature that the terms "sulfathiazole" and "sulfamethylthiazole" be accepted as nonproprietary designations for 2-sulfanilamidothiazole and 2-sulfanilamido-4-methylthiazole, respectively. The adoption of these terms does not indicate at this time the acceptance of the substances.—*J. A. M. A.*, June 15, 1940.

Jamaica "Specialist" Offers a "Rupture Cure."—The Bureau of Investigation of the American Medical Association reports that the U. S. Post Office issued a fraud order against H. F. Pettit, Kingston, Jamaica, who sold through the mails the "Jiffy Stopper" with the claim that it would "cure" hernia. According to the Post Office memorandum on this case "The device sold in the scheme is a simple truss which is made of a wire spring, a leather strap, and two covered composition pads, one on each end of the wire spring so that one will cover the hernia and the other will provide counter pressure on the buttocks." The medical evidence showed that the "Jiffy Stopper" would not thicken the tissues of the hernial opening or strengthen the walls and muscles "eventually closing the opening entirely," as represented by the promoters of this scheme. Hence to set forth the device as a cure for all ruptures "in a short time" or in any length of time was shown to be a dishonest practice, as was the claim that by wearing of the Jiffy Stopper "it is impossible" for the hernia to slip out of place. Accordingly a fraud order was issued on Aug. 14, 1939, against the names H. F. Pettit, H. Pettit, Specialist, and H. F. Pettit, Specialist, debarring this individual and his scheme from the United States mails.—*J. A. M. A.*, June 22, 1940.

Desoxycorticosterone.—The Council on Pharmacy and Chemistry reports that it has had under consideration for some time preparations of the adrenal cortex. When desoxycorticosterone was synthesized

and marketed as an acetate for clinical use, it was anticipated that much of the inaccuracy and unreliability of adrenal cortex therapy associated with the use of extracts of the adrenal cortex gland would be eliminated, since the administration of this potent steroid on a basis of dosage by weight appeared to offer advantage over the administration of adrenal cortex extracts, which are rather unsatisfactorily assayed on laboratory animals. The early reports of dramatic clinical success in the treatment of Addison's disease were held most promising. Soon after desoxycorticosterone was employed in Addison's disease, the Council learned of the occurrence of significant untoward reactions and, in several cases, actual fatalities. One of the most striking effects obtained with this substance was hypertension, which in some cases resulted in cardiac failure and death. There has been sufficient confirmation of these results to warn against the indiscriminate and excessive use of this substance in routine therapy. Adequate evidence of another sort has also led to the conclusion that desoxycorticosterone acetate does not possess all the properties of the adrenal cortex gland and that the synthetic principle, therefore, does not furnish complete replacement therapy. In view of the possible widespread use of desoxycorticosterone acetate, the Council requested Dr. Edgar S. Gordon of the University of Wisconsin Medical School to prepare a review of the physiologic and clinical data obtained with this substance up to the present time. The Council authorized publication of Dr. Gordon's article "The Use of Desoxycorticosterone and its Esters in the Treatment of Addison's Disease" and it appears as a part of the Council's report.—*J. A. M. A.*, June 29, 1940.

NEWS

Brazos County Venereal Disease Clinic.—Plans for a venereal disease clinic to serve Brazos County were agreed upon at a meeting of physicians in Bryan recently, states the Bryan *Eagle*. A budget of $5,500 has been set up for the operation of the clinic, of which amount the State will supply $4,800 and the balance will be divided about equally between the city and the county. Dr. T. E. Dodd will be the administrative director of the clinic. All Bryan physicians have agreed to cooperate in its operation. Drs. R. H. Harrison, R. J. Hunnicutt and S. C. Richardson will give their services during the first year, with Drs. S. B. Slaughter, R. B. Grant, Jr., and K. W. Fox, as alternates. Physicians will donate their services in rotation on an annual basis. The economic status of patients applying to the clinic for examination and treatment will be investigated carefully to screen out those able to pay for such services.

Nation-wide Enrollment of Voluntary Blood Donors.—The American Red Cross, at the request of the Surgeon General of the United States Army, has underway experimental plans for the promotion of a nation-wide corps of volunteer blood donors which will become part of the national defense program, when and if needed. The plan proposes to make available blood plasma to the United States Army Medical Corps in event of emergency. The proposed plan for collecting blood is patterned after the blood bank idea except plasma will be used instead of whole blood, since, as pointed out by Dr. William DeKleine, National Medical Adviser of the Red Cross, it can be kept indefinitely, does not require typing, and can be transported any distances, which makes it applicable in military as well as civilian practice.

Preliminary studies will be made to perfect collecting, storing and administering plasma under conditions comparable to war-time emergency. Blood for this initial study will be furnished by volunteers at the various hospitals where members of the Research Committee are regularly employed, and the plasma collected will be stored and used as emergencies arise at these hospitals.

Graduate Training in Surgery.—The American College of Surgeons has published recently a twenty-four page "Manual of Graduate Training in Surgery," in which are incorporated the requirements for its approval of programs of training in general surgery and the surgical specialties in hospitals of the United States and Canada. The College requires three principal types of institutions as offering acceptable programs of graduate training in surgery: (1) universities or teaching hospitals supervised by departments of surgery of medical schools and graduate schools; (2) fellowships in recognized clinics and other organized groups; and (3) selected hospitals which by utilizing their own facilities to the fullest are able to carry acceptable programs through to completion, or which have supplemented their educational program, particularly in the basic medical sciences, through affiliation with medical schools and graduate schools.

The minimum standard for graduate training in surgery included in the "Manual" comprises five clauses, concerned with (1) duration and objective of the program; (2) organization and supervision; (3) basic medical sciences; (4) clinical material, and (5) organized study. Under the requirements, an acceptable program requires a minimum of two and preferably three or more years of training in surgery beyond at least one year of general internship.

The manual is also included in the June, 1940, issue of the *Bulletin* of the American College of Surgeons. The purpose of the manual is to raise the requirements for fellowship in the College and to help to provide better preparation and training for surgery.

The American Museum of Health Incorporated, at the New York Worlds Fair, will be housed in a permanent building at present occupied by the Masterpieces of Art, at the conclusion of the Forty Fair, October 27, according to a recent announcement. The Museum will be opened to the public early in 1941. It is anticipated that physicians and public health officers will come to this center for training in modern methods in health education. The medicine and public health building has attracted more than 9,000,000 visitors since its opening last year, and a survey reveals that the American Museum of Health has attracted more than 21 per cent of the total Fair paid attendances this year.

In response to many requests for assistance in planning health education material, the American Museum of Health has established headquarters, "Aids in Health Education," in the Hall of Medical Science. All physicians, dentists, nurses, teachers and public health workers are invited to register at these headquarters while visiting the Fair. Those who do not anticipate a visit are invited to address communications, if interested in aids in health education.

American Board of Obstetrics and Gynecology Examinations.—The annual written examination and review of case histories (Part I) for Group B candidates will be held in various cities of the United States and Canada on Saturday, January 4, 1941, at 2:00 p. m. Candidates who successfully complete the Part I examinations proceed automatically to the Part II examinations held later in the year.

The following action regarding case records to be submitted by candidates taking the Group B, Part I, examination after January 1, 1942, was passed by the Board at its annual meeting in Atlantic City, New Jersey, on June 6, 1940: "Case records submitted by candidates must be of patients treated

within four years prior to the date of the candidate's application. The number of cases taken from one's residency service should not be more than half (25) of the total number of fifty cases required."

Applications for admission to Group B, Part I, examinations must be on file in the Secretary's Office not later than October 5, 1940. For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh, Pennsylvania.

American Public Health Association Meeting.—The sixty-ninth annual meeting of the American Public Health Association will be held in Detroit, Michigan, October 8-11, with the Book-Cadillac Hotel as headquarters.

The Michigan Public Health Association, the American School Health Association, the International Society of Medical Health Officers, the Association of Women in Public Health, and a number of other allied and related organizations will meet in conjunction with the Association.

The annual meeting of the American Public Health Association is the largest health convention held on this continent. It will bring 3500 health officials to Detroit for a series of scientific meetings covering all phases of health protection and promotion. A health exhibit will be held in connection with the meeting and an Institute on Health Education is scheduled prior to the official opening.

Mr. Abner Larned of Detroit is chairman of the Michigan committee on arrangements and Dr. Henry F. Vaughan, Health Commissioner of Detroit, is executive secretary of the committee.

Further information may be secured by addressing the Executive Secretary, American Public Health Association, 50 West 50th Street, New York City.

The American Academy of Ophthalmology and Otolaryngology will hold its forty-fifth annual convention in Cleveland, October 6 to 11, with headquarters at the Hotel Cleveland.

The Academy, an organization of more than 2,500 specialists in diseases of the eye, ear, nose and throat, carries on an active program of education for its members. In addition to scientific papers, an elaborate series of courses is presented at each convention to bring the members up to date in their chosen fields. More than 100 teaching lectures will be offered this year.

In the past year, arrangements have been made to extend the teaching activities to young physicians just entering on specialization. Home study courses are being prepared for any of these young practitioners who wish to take them and their work will be supervised by members of the academy interested in improving the caliber of specialists in practice.

The Academy will have as honor guest Dr. Secord H. Large, Cleveland, who this year completes thirty years as comptroller of the organization.

Immediately following the Academy meeting, there will be a Pan-American Congress of Ophthalmology, October 11 and 12, which eye specialists from all the Latin American countries are expected to attend.

Dr. Frank Brawley, Chicago, is president of the Academy and Dr. William P. Wherry, 1500 Medical Arts Building, Omaha, Nebraska, is executive secretary.

Personals

Dr. Erwin O. Strassmann, Houston, was awarded the 1940 Foundation Prize of the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons for his thesis on original research work on ovulation entitled, "The Theca Interna Cone and Its Tropism Toward the Ovarian Surface, A Typical Feature in Human and Mammalian Follicles." As the winning contestant, Dr. Strassman will present his paper before the annual meeting of the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons at Excelsior Springs, Missouri, September 26-29.

Dr. John Walter Torbett, Jr., Marlin, has accepted a position as assistant to Dr. H. D. Kerr in the State University Hospitals, Iowa City, Iowa.

Dr. Haskell Heiligman, Overton, has returned from postgraduate study in Chicago, advises the Overton *Press.*

Dr. George R. Herrmann, Professor of Clinical Medicine, University of Texas School of Medicine, Galveston, was recently elected an honorary member of the St. Louis Medical Society.

Dr. E. F. Yeager, Mineral Wells, has returned from Chicago, where he took postgraduate work in radiology, states the Mineral Wells *Index.*

Marriages

Dr. J. K. Peden to Miss Elise Cabbell Gray, both of Dallas, August 3, 1940.

Dr. Samuel Singer to Dr. Helen Gertrude Goldberg, both of Houston, July 21, 1940.

Dr. Charles N. LaDue to Miss Dorothy Drews, both of Dallas, August 9, 1940.

Dr. William S. Rhode of Colorado City, to Miss Naomi Childers of San Antonio, August 20, 1940.

Dr. Glenn Hall Ricks of Brady, to Miss Alice Glenn Young of Lampasas, August 3, 1940.

SOCIETY NEWS

Big Bend Counties Society

August 13, 1940

(Reported by Joel Wright, Secretary)

The Platform of the American Medical Association—N. D. Buie, Marlin, President-elect, State Medical Association, Marlin.
The Relation of the State Medical Association to the Public—Preston Hunt, Texarkana, President, State Medical Association.

Big Bend Counties Medical Society met August 13, at the Post Hospital, Marfa, with thirty-three members and visitors present. L. A. Lavanture, president, presided.

Dr. Buie delivered an interesting address on the American Medical Association and its accomplishments. It was pointed out that Texas doctors with the assistance of Senator Connally of Texas and Undersecretary of the Interior, the Hon. Alvin J. Wirtz of Texas, were responsible for the health plank written into the platform of the Democratic party at its recent convention in Chicago.

Dr. Hunt gave a scholarly and practical discussion of the relation of the medical profession of Texas to the public and emphasized the importance of medicine placing its own house in order.

New Members.—Francis E. Oneil, Sanderson, was elected to membership.

Frank P. Matthews, Ph. D., Alpine, and Lieutenants Reynolds and Sayler of the Post Hospital staff, were elected to honorary membership.

Hidalgo-Starr Counties Society

July 11, 1940

Pterygium—J. B. Casey, McAllen.
Early Diagnosis of Perinephritis Abscess—H. M. Westfall, Weslaco.

Hidalgo-Starr Counties Medical Society met July 11, at the Hotel Edinburg, Edinburg, with fifteen members present. The scientific program as given above was carried out.

Hunt-Rockwall-Rains Counties Society

July 9, 1940

(Reported by M. L. Wilbanks, Secretary)

Hunt - Rockwall - Rains Counties Medical Society members were guests of the Auxiliary for a basket picnic lunch July 9, on the dawn of Dr. and Mrs. J. W. Ward of Greenville. The affair was attended by twenty-two physicians.

At a brief business meeting, O. H. Trimble presided as president *pro tem.* The Society voted its

appreciation to Dr. and Mrs. Ward and the Auxiliary for the splendid hospitality and the excellent meal of fried chicken and all that goes with it on a picnic.

Karnes-Wilson Counties Society

July 9, 1940

Abdominal Surgery—August Herff, San Antonio.

Karnes-Wilson Counties Medical Society held a banquet meeting at the Bluebird Cafe, Karnes City, followed by a business session at the Community House, with S. A. King and S. E. Shannon as hosts. Twelve members and one visitor were present and the scientific program as given above was carried out.

Williamson County Society

July 9, 1940

Organization and Function of the Medical Department During War—Colonel Taylor N. Darby, M. C., Commanding Officer, Station Hospital, Fort Sam Houston, Texas.

Williamson County Medical Society met July 9, at the Country Club, Taylor, with twenty-five physicians and guests present. The scientific program as given above was carried out.

Seventh District Medical Society

July 23, 1940

(Reported by A. L. Nanny, Marble Falls, Secretary)

The Seventh District Medical Society met July 23, at Barton Springs, Austin, with an attendance of 125 members and guests, for a dinner and scientific program. Chicken barbecue and watermelon were enjoyed.

Lee Edens, Austin, vice-president, presided. R. T. Wilson, Councilor of the Seventh District, introduced Preston Hunt, Texarkana, president of the State Medical Association, who spoke on the subject of socialized medicine. Dr. Hunt emphasized the value of a closely knit medical organization with solidarity in all affairs pertaining to public policy, in the interest of protecting the public health and medicine.

Tom Oliver, Waco, read a paper on "Abdominal Emergency" prepared by Dr. K. H. Aynesworth, who was unable to attend on account of illness in his family. The paper of Dr. Aynesworth was discussed by Joe Gilbert, Austin.

Eleventh District Society

April 4, 1940

(Reported by Clayton Shirley, Secretary)

The Eleventh District Medical Society met April 9, at Tyler. Members of the Smith County Medical Society abstracted talks presented by various guest speakers, which abstracts follow*:

VITAMINS—Meyer Bodansky, Galveston (abstracted by L. T. Neill, Tyler).—Dr. Bodansky recited a brief history of vitamin research, mentioning such pioneers as Lunin, Eijkman, Pekelharing, Hopkins, Funk, Osborne, Mendel and McCollum. The most rapid advances in our knowledge of vitamins have occurred in recent years. In 1920 our knowledge of vitamins was limited to such facts as: (1) Rice polishings contained a water-soluble factor (vitamin B) which was growth-promoting in rats and in man was evidently responsible for the prevention and cure of beriberi and polynuritis. (2) Cod-liver oil and other foods contained a fat-soluble factor (vitamin A) which too was growth promoting in rats and a deficiency in man appeared to result in xerophthalmia. (3) There was a water-soluble factor (vitamin C) in certain foods, notably citrus fruit, the absence of which in man would result in scurvy. The chemical nature of all these vitamins was completely unknown.

Progress during the third decade was more rapid. Rickets became recognized as a deficiency disease, due to the lack of vitamin D. The vitamin B factor was shown to consist of several components, and before the end of the decade vitamin B-1 was isolated in crystalline form. Vitamin C was also isolated during this time, but was not identified until later. Much progress in the study of the source, action, and potency of vitamins A and D was achieved. The last ten years have brought dramatic advances in the fields of vitamins and nutrition in general.

Vitamin A has a definite role in the maintenance of the integrity of epithelial structures. Deficiency results in varying diseases of keratinizing metaplasia of conjunctiva, cornea, mucosa of the nose, throat, sinuses, trachea, bronchi, renal pelvis, ureters, etc. Xeropthalmia is a late and advanced state of vitamin A deficiency but varying degrees of night blindness are seen frequently. Recent reports are conflicting as to how frequent some degree of vitamin A deficiency is manifested by poor dark adaptation. The daily requirement of vitamin A is placed from 3,000 to 10,000 International Units. Vitamin A deficiency has been seen in patients with celiac disease and steatorrhea, evidently resulting from faulty absorption. It is also seen in hepatic cirrhosis and has been explained on the basis of improper utilization.

A deficiency of vitamin B is now considered to be associated with things other than beriberi. The peripheral polyneuritis of alcholics is apparently due to two factors: (1) a deficient intake of vitamin-containing foods, and (2) a low vitamin-caloric ratio. When this ratio falls below a certain level, symptoms of deficiency appear. Vitamin B therapy produces marked improvement of the neuritis in alcoholics. Polyneuritis of pregnancy and of pellagra are likewise explained and treated. Vorhaus in a series of 520 cases of polyneuritis of varied etiology obtained improvement in 75 per cent within four weeks of treatment with 3 to 10 mg. vitamin B-1 daily. Advanced cases of vitamin B-1 deficiency are not so rare in this country. Out of 5,506 medical admissions to the Boston City Hospital, 35 exhibited cardiovascular manifestations of vitamin B-1 deficiency (beriberi heart). The vitamin B-1 requirement depends on the energy production, being about 15 I. U. per 100 calories. An individual producing 2,000 calories requires, therefore, daily 0.6 to 0.9 mg. of thiamin chloride. In patients with evident deficiency, a fairly prompt and favorable response should be obtained with a daily dose of 10 mg.

Nicotinic acid is the component of the vitamin B complex found effective in the treatment of pellagra. It was isolated by Funk from rice polishings in 1913, but its significance in treating black tongue in dogs was demonstrated in 1938. Its successful use in the treatment of pellagra soon appeared in literature from a number of sources. The normal requirement of nicotinic acid has not been determined, and the individual requirements in pellagrins is variable, but is around 500 mg. daily.

Vitamin B-6 is chemically related to nicotinic acid. Its role in human nutrition was revealed very recently. It appears to be more effective in treating pellagra than nicotinic acid. Spies, Bean, and Ashe reported cases which did not respond to nicotinic acid and thiamin chloride but did respond readily to B-6. There is evidence that B-6 is essential in the metabolism of unsaturated fatty acids, but the exact clinical significance of this is only speculative. According to one recent report, vitamin B-6 produced definite improvement in several patients with pseudohypertrophic muscular dystrophy.

Riboflavin (vitamin B-2) is an important component of the vitamin B complex, a deficiency of which results in cheilosis. It has also been shown that some of the cutaneous lesions of pellagra which fail to heal with nicotinic acid, show a striking response to riboflavin. Reports as yet unconfirmed,

*Appreciation of the Society is expressed to the Mother Frances Hospital of Tyler for supplying a medical secretary to record the transactions of the meeting.

indicate that riboflavin exerts a beneficial effect in interstitial keratitis.

There are other components of the vitamin B complex known to exert certain specific effects on experimental animals, but their role in human nutrition is largely a matter of speculation.

The role of vitamin C deficiency in scurvy is well known. We also know that vitamin C is in some way concerned with the normal production of intercellular material. Though scurvy in advanced states is comparatively rare, there is a growing opinion that a good number of our population suffer from some degree of vitamin C deficiency. The daily requirement of cervitamic or ascorbic acid is about 25 mg. for infants, 50 mg. for older children and adults, and 60 to 100 mg. during pregnancy. Blood and urine analysis may afford data in support of the diagnosis of subclinical scurvy. It is not definitely known whether the altered vascular permeability in scurvy is due to the deficiency of vitamin C or to a lack of some associated factor. Szent Gyorgyi has claimed a separate factor, vitamin P, to be responsible, but other workers were unable to confirm this. Recently Scarbrough has revised some work in support of this factor.

Irradiation of seven-dehydrocholesterol yields a product identical with natural vitamin D. Vitamin D seems to have two functions, one being to increase the absorption of calcium from the gut and the other to increase the urinary excretion of phosphorous. Our main interest in vitamin D is in the prevention of rickets. Usually 1,000 I. U. daily, given as cod liver oil, is sufficient to prevent or cure rickets. Some cases require more. One case is supposed to have shown no improvement until the dosage was up to 1,100,000 or 1,500,000 I. U. daily of vitamin D.

Vitamin E is essential in the reproduction of lower animals but there is no sure evidence that vitamin E deficiency occurs in man. Its use in threatened abortion is essentially empirical. A preliminary report by Wechsker claims improvement in two cases of amyotrophic lateral sclerosis treated with vitamin E.

Vitamin K was discovered by the Dutch biochemist, Dam, in 1935. Alfalfa and putrified fish meal are rich sources of vitamin K. The exact relation of vitamin K to the production of prothrombin has not been elucidated, but evidence that failure to absorb the vitamin K, as occurs in obstructive jaundice, leads to a reduction in prothrombin and a tendency to hemorrhage. Administration of minute amounts of vitamin K concentrate is followed very rapidly by a rise in prothrombin and a reduction in the "prothrombin clotting time." Vitamin K is without effect in conditions in which the tendency to hemorrhage is not due to prothrombin deficiency. There is no synthetic vitamin K available as yet. The amount of vitamin K required is small; as little as 1 mg. daily, having been found sufficient to correct prothrombin deficiency in cases of obstructive jaundice.

In conclusion, subclinical or borderline cases of nutritional deficiency are very common. Recent advances and developments in clinical and laboratory methods of diagnosis of these conditions will aid greatly in their rational management. A patient with avitaminosis or any deficiency rarely suffers from one single deficiency, though one particular may be the most boldly manifested. Most likely, the patient is a victim of a multiple deficiency. It is also fairly well established that the activity of all the vitamins are inter-related so that one is necessary for the proper action of another, etc.

MANAGEMENT OF PEPTIC ULCER HEMORRHAGE—Donovan C. Browne, New Orleans, Louisiana (abstracted by Edwin G. Faber, Tyler).—The mortality statistics of several authors was reviewed, showing a mortality of from 1.3 per cent to 21 per cent. The great variance in these figures is the result of confusion in classification of risks. The value of usual blood findings was discounted and the degree of hemorrhage was classified by the absence or existence of shock.

The most important consideration in therapy should be an attempt to correct the altered physiology resulting from hemorrhage. A loss of 40 per cent or less of blood volume brings readjusting mechanisms into play which restore conditions to normal in a short time. When blood loss exceeds 40 per cent of the total circulating blood, the body is unable to replace the loss without the aid of transfusion. In sudden large blood loss, there is a prompt fall of blood pressure resulting from reduction of the circulating blood volume, which curtails further bleeding. This fall in blood pressure is accompanied by excitation of the carotid sinus and aortic reflexes and anoxemia of the medullary centers; liberation of adrenalin follows, and the heart rate is accelerated. Increase in rate does not increase cardiac output. Anemia of the renal tissues and lowered filtration results in urea retention. Lowered pressure and diminished blood volume results in malnutrition of all the tissues. The cerebral centers suffer most and a state of anxiety, dullness, confusion, or apathy may develop; if circulatory failure persists, the medullary centers fail and shock is perpetuated. As readjustment takes place, the resultant rise in blood pressure is conducive to further bleeding by dislodgement of the clot. Delayed physiological effects of hemorrhage are:

(1) Replacement of lost fluid by osmosis of tissue fluids to the vessels, consequently reducing the red cell concentration.

(2) Restoration of the cellular elements which occurs through the increased activity of the hematopoietic organs.

Clinically, three types of bleeding peptic ulcer are noted:

(1) The ulcer which bleeds intermittently but never sufficiently to produce shock.

(2) The sudden violent hemorrhage in young or middle-aged individuals in which the compensatory mechanisms are adequate to stem the hemorrhage and complete recovery results.

(3) The group in the later decades of life with sclerotic vessels, and normal vascular compensatory mechanism is inadequate. It is in this group that careful clinical judgment must be exercised and surgery instituted at the proper time.

Various methods of medical treatment were discussed and the results on 131 cases of bleeding ulcer noted. The dietary management is varied, using all the classical methods from Smithers' starvation regimen to the more aggressive method of Meulengracht. Aluminum hydroxide therapy, including the continuous drip method of Winkelstein, is used.

The author has adopted a plan which embodies many of these various methods and calls for a brief period of starvation until the patient has recovered from shock and hematemesis. During this period, direct blood transfusion and other parenteral fluids supply the physiological requirements. After this period, which usually lasts twenty-four hours, milk, gelatin, and lime water are given at hourly intervals. Colloidal aluminum hydroxide is given at regular intervals. These feedings are gradually increased, and on the third or fourth day strained cereal is added. Later, the pure foods are added until at the end of the second week three small meals a day, supplemented by intermediate feedings, are given.

The supplemental measures used are cold to the abdomen and blood transfusion. The three acceptable methods of transfusion: the indirect, continuous drip, and direct, are discussed. When possible, the author prefers the direct method.

Surgery was briefly discussed and condemned except in carefully selected cases.

Statistical studies were presented based on observation of 430 cases of peptic ulcer in which active hemorrhage was present in 131 cases. Tables showing incidence, type of treatment, and mortality statistics were shown.

The following conclusions were drawn: (1) Conservative medical therapy is the procedure of choice in treating bleeding ulcers. (2) Reservation should be practiced in accepting Meulengracht's immediate feeding of patients with active bleeding. (3) Aluminum hydroxide offers an approach to attaining physiological control of a bleeding ulcer. (4) Transfusions by the direct method can be given safely without worry over elevated venous pressure, arterial pressure or any systemic reaction of significance. (5) Vitamins have an undetermined position in bleeding ulcer therapy. (6) Feeding is not started immediately in bleeding ulcer cases; continuous aluminum hydroxide drip is instituted and a dietary regimen is begun when hemorrhage has ceased and sufficient time has elapsed for clot fibrosis. Parenteral fluids should be given freely to maintain nutrition, water balance, circulating volume and to combat acidosis. Until proved otherwise synthetic vitamin C will be considered a valuable adjunct to the regimen.

Sulfanilamide and Internal Fixation in the Treatment of Compound Fractures (Willis C. Campbell, Memphis, Tennessee). — Discussion was opened with a few general remarks concerning the evaluation of any agent in the treatment of pyogenic infections. There was a detailed analysis and discussion of fifty-four cases of compound fractures treated with sulfanilamide per orum or locally, and in thirty-three of these fifty-four cases some form of internal fixation was used. The majority of material employed was vitallium plates and screws, but rustless steel pins and wires were also employed.

Of the fifty-four cases discussed, thirty-five were fresh fractures divided into mild, moderate, and severe groups. The first of these proved to be no more than simple fractures, the moderate gave excellent results, but the severe, of which there were nineteen, showed infection in eight along with the various complications. A control group of fifty cases with compound fractures treated before the advent of sulfanilamide showed approximately the same percentage of infection.

The remainder of the fifty-four cases (nineteen) were divided into those with active infection and potential infection (those that were infected but had no draining sinuses at the time). Here dramatic results were had; sinus tracts and sequestra were excised, vitallium plates, bone grafts held by vitallium screws, etc., were employed freely. No relighting of infection occurred in any of these cases. Good results and union were obtained in fifteen of these nineteen, the remaining four being too recent for final results.

Detailed case reports of nine cases were given, illustrating one or more types of cases in each group.

Sulfanilamide has been employed as a prophylactic pre- and postoperative measure, to prevent pyogenic infection, in thirty-three cases of major surgery necessitating excessive trauma, and in eighteen major surgical cases that were potentially infected. These are compared with 100 control cases without sulfanilamide. No definite conclusions could be drawn from this as the number was too small. Lantern slides were shown.

Hematuria—T. Leonard Howard, Denver, Colorado (abstracted by Thomas Jarmon, Tyler).—Dr. Howard's discussion was both timely and instructive. The numerous excellent slides depicting various grave lesions demonstrates the multiplicity of causes of bloody urine. Many of these lesions are among the most serious involving the urinary tract. Bloody urine, microscopic or macroscopic, can be just as devastating as laryngeal diphtheria and our sole means of knowing its importance is proper urologic investigation. Present day clinical medicine requires the possession of a microscope and knowledge of how to use it and above all that it be used routinely. A demonstration of the hopelessness of the patient after having several hemorrhages and months having elapsed was presented.

Calculous disease, tuberculosis, cancer, or whatever the lesion, need early recognition if the patient is to be given hopeful rational treatment.

Diaphragmatic Hernia — Albert O. Singleton, Galveston (abstracted by C. E. Willingham, Tyler). —Diaphragmatic hernia may be traumatic or congenital. The medical profession must became "diaphragmatic hernia conscious" if they expect to diagnose these conditions, many of which now exist with slight symptoms and are perfectly compatible with life. More of these cases are being found in recent years. Even though the x-ray has been responsible for the diagnosis of these conditions, it is often overlooked by the roentgenologist. In John Sealy Hospital alone twelve congenital diaphragmatic hernias have been diagnosed in the last four years and up until that time only two cases were recognized. The same is true in the experience of other investigators.

The embryology of the formation of the diaphragm explains the various types of hernia of the diaphragm. The foregut and liver migrate downward from the thoracic cavity. The diaphragm is formed above and around these structures developing from four different positions, the septum transversus in front, the pleuroperitoneal membrane from each side and from the mesoderm of the dorsal mesentery of the foregut posteriorly. These all spread toward the midportion where they fuse. If fusion is incomplete a hernial opening will result, such openings occurring most frequently in the costo-lumbar region or in the poststernal area.

Types. — Congenital enlargement of the hiatus through which the esophagus passes is the most common cause of all diaphragmatic hernias. True diaphragmatic hernias have a hernial sac. False diaphragmatic hernias have no sac. Misplaced abdominal structures may be very small in amount or may include most of the contents of the abdomen passing through the hernial opening. Most hernias are in the left side of the abdomen. Acquired hernias are due to traumatism either from stab wounds or from rupture of the diaphragm.

Symptoms. — Symptoms vary widely depending upon the effects upon respiration, the heart, and the degree of obstruction to the alimentary canal. Large congenital hernias often result in death in very early infant life, or the vicera may become adapted to the abnormal position and a child may exist with malnutrition and poor development. X-ray investigation of such children may prove a diaphragmatic hernia to be present. Such symptoms of a more or less mysterious nature referable to the chest or intestinal tract should call the doctor's attention to the possibility of such a condition.

The esophageal hiatus hernia is the most common of all the types recognized in adult life. Symptoms suggest various upper abdominal diseases as appendicitis, intestinal obstruction, cholecystitis, cholelithiasis, gastric ulcer, duodenal ulcer, hyperacidity, secondary anemia, cardiac disease and gastric crisis from locomotor ataxia. The chief symptoms referred to are dyspepsia, palpitation of the heart, intermittent pain and vomiting and gaseous eructation. One characteristic is that there are intervals of complete relief. Usually the symptoms gradually grow worse.

Treatment.—Surgery is not always indicated although a vast majority do require surgery. Such hernias are approached either through the abdomen or through the chest as conditions require. It is

stressed that the operation is far from being simple and that a number of mechanical aids are of great advantage in repairing these hernias. Palliative measures may aid and be somewhat beneficial to the debilitated. In some of these phrenic nerve interruption may give relief.

Summary.—Diaphragmatic hernia is very common. Until ten years ago it was rarely diagnosed except at autopsy. The presence of irregular upper abdominal symptoms that cannot be explained by ordinary causes should suggest diaphragmatic hernia to the physician. X-ray is the means of diagnosis, but evident conditions are often overlooked by the roentgenologist.

Twelfth District Society

July 9, 1940

(Reported by R. K. Harlan, Secretary)

The Twelfth (Central Texas) District Medical Society met July 9, at the Falls Hotel, Marlin, with Dan Warren, Waco, president, presiding.

The following scientific program was carried out:

Special Problems Connected with External Cephalic Version—M. A. Davison, Marlin.
(Discussed by T. L. Denson, Cameron, and Dan Warren, Waco.)

The Use of Azo-chloramid Saline Solution in the Treatment of Carbuncles—C. G. Swift, Cameron.
(Discussed by I. W. Jenkins, H. R. Dudgeon, and Dan Warren, Waco; I. F. Cannon, Mart, and T. H. Thomason, Fort Worth.)

The Treatment of Cancer of the Breast with Special Reference to the Combination of Surgery and X-ray—T. H. Thomason, Fort Worth.
(Discussed by H. R. Dudgeon and I. W. Jenkins, Waco; M. A. Davison, Marlin, and R. C. Curtis, Temple.)

Chronic Pulmonary Diseases (lantern slides)—Henry R. Hoskins, San Antonio.
(Discussed by H. R. Dudgeon, Jr., Waco.)

Spinal Cord Tumors—Paul Bassel, Temple.
(Discussed by H. E. Hipps, Marlin.)

Useful and Practical Methods in Determining the Severity of the Condition and the Prognosis in Patients with High Blood Pressure—Samuel A. Shelburne, Dallas.
(Discussed by J. W. Torbett, Sr., Marlin, and Dan Warren, Waco.)

The Diagnosis and Treatment of Coronary Occlusion—M. B. Aynesworth, Waco.
(Discussed by C. G. Swift, Cameron, and Dan Warren, Waco.)

A luncheon in the Falls Hotel was attended by 150 members of the Society and the District Auxiliary. A musical program was presented by Misses Jonidel and Jojarine Barnett, accompanied by Miss Mary Frances Robinson.

Mrs. William Hibbitts, Texarkana, then first vice-president and now president of the State Auxiliary, discussed plans of the State organization for increasing its membership during the year.

Preston Hunt, Texarkana, president of the State Medical Association of Texas, spoke on the progress of the State Medical Association of Texas.

The local committee on arrangements for the meeting consisted of A. C. Hornbeck, chairman, J. H. Barnett, and A. C. Bennett.

Waco was selected as the next place of meeting, which will be held January 14, 1941.

AUXILIARY NOTES

Officers of the Woman's Auxiliary to the State Medical Association of Texas; President, Mrs. William Hibbitts, Texarkana; honorary life president, Mrs. A. C. Scott, Sr., Temple; president-elect, Mrs. S. F. Harrington, Dallas; first vice-president, Mrs. H. Leslie Moore, Dallas; second vice-president, Mrs. A. E. Moon, Temple; third vice-president, Mrs. A. B. Pumphrey, Fort Worth; fourth vice-president, Mrs. Joe B. Foster, Houston; recording secretary, Mrs. Walter A. Minsch, Kerrville; publicity secretary, Mrs. W. F. Armstrong, Fort Worth; treasurer, Mrs. J. Frank Clark, Abilene; parliamentarian, Mrs. J. W. Tottenham, Brownwood; and corresponding secretary, Mrs. Ralph Cross, Texarkana.

Hidalgo-Starr Counties Auxiliary met July 11, at the Edinburg Hotel, Edinburg. After dinner with members of the county medical society the Auxiliary held a separate session, with Mrs. G. Van Amber Brown, McAllen, presiding. Programs and plans for the coming year were discussed.

Mrs. A. S. Osborne, McAllen, read a paper on the "Red Cross: Its Origin and Purpose."

Miss Martha Ann Wallace entertained with several delightful readings, after which the meeting adjourned.—Mrs. L. M. Southwick.

The Twelfth (Central District) District Auxiliary met July 9, at the Falls Hotel, Marlin, with forty members attending. Mrs. M. A. Davison, Marlin, gave the address of welcome, which was responded to by Mrs. H. R. Dudgeon, Waco.

Mrs. William Hibbitts, Texarkana, then vice-president and now president of the State Auxiliary, delivered an address. At noon members of the Auxiliary joined members of the District Medical Society for a luncheon. On this occasion Dr. Preston Hunt, Texarkana, president of the State Medical Association, was the featured speaker.

Members of the District Auxiliary were guests of the Falls County Auxiliary at a musical tea at the home of Dr. and Mrs. N. D. Buie in the afternoon. Miss Agnes Weeks of Dallas was presented in a program of piano selections.

Official hostesses for the meeting were Mrs. A. C. Hornbeck and Miss Evelyn Rice Hutchins, Marlin, president and secretary, respectively, of the Falls County Auxiliary.

CHANGES OF ADDRESS

Dr. J. M. Barnett, from Ladonia to Clarksville.

Dr. J. J. Croley, from McKinney to Nevisdale, Kentucky.

Dr. David W. Davis, from George West to Sanatorium.

Dr. J. C. Duff, from Corpus Christi to Anson.

Dr. Clarence Edens, from Tyler to Durham, North Carolina.

Dr. A. D. Ellsworth, from Plainview to Long Beach, California.

Dr. L. E. Gee, from Avinger to Lone Oak.

Dr. E. Jack Giles, from Corpus Christi to New Orleans, Louisiana.

Dr. Leslie D. Hancock, from Houston to Fort Sam Houston.

Dr. Henry R. Hoskins, from Sanatorium to San Antonio.

Dr. J. B. Lee, from Dallas to Denver, Colorado.

Dr. James A. Levins, from Huntsville to Lufkin.

Dr. John McGivney, from Dallas to Galveston.

Dr. J. W. Poulter, from Alto to Dallas.

Dr. Wayne Reeser, from Lubbock to San Jon, New Mexico.

Dr. Y. C. Smith, from Houston to Corpus Christi.

Dr. Wayne H. Taylor, from Lufkin to Fort Worth.

Dr. John Walter Torbett, Jr., from Marlin to Iowa City, Iowa.

Dr. Kenneth Walborn, from Dallas to Sulphur Springs.

Dr. Corinne Westphal, from Houston to Yorktown.

Dr. Darrell Willerson, from Lampasas to San Antonio.

BOOK NOTES

[1]**Essentials of the Diagnostic Examination.** By John B. Youmans, B. A., M. S., M. D. Associate Professor of Medicine and Director of Postgraduate Instruction, Vanderbilt University Medical School. Fabrikoid, 384 pages. Price, $3.00. The Commonwealth Fund, New York, 1940.

This little book is written with the purpose of introducing painstaking methods in history taking

[1]Reviewed by Henry M. Winans, M. D., Dallas, Texas.

and examination of patients. In this aim, it is eminently successful. The proper method of getting a good history as well as the detailed examination of the individual is thoroughly presented. A very good feature of this lies in the directions for the neurological examination. Much time is saved, also, by having a summary of the origin, function, and distribution of the cranial and spinal nerves. Any physician might well improve his technique by studying this work once or twice a year.

Since the book is meant to contain only the essentials of the diagnostic examination, it seems that the large amount of space given over to details of laboratory examinations is out of place. It is impossible to compress all of the laboratory procedures into such a small space, and it seems of no advantage to attempt doing so in view of the many excellent works on this subject. On the other hand, much might have been made of this section by outlining what laboratory examinations are indicated when a certain group of symptoms or physical findings appear. For the many workers who know how to perform laboratory tests, there are relatively few who know when such tests should be done.

The appendix contains valuable suggestions regarding the equipment and materials necessary for an office laboratory. The book has other companions in the technique published by a number of hospitals for the use of its resident staff. This work could well be used by hospitals not having their own published technique. This is not to detract any from its obvious value to any one who will study and make use of the recommendations therein contained.

[2]**Dermatologic Therapy in General Practice.** By Marion B. Sulzberger, M. D. Assistant Clinical Professor of Dermatology and Syphilology, Skin and Cancer Unit of the New York Post-Graduate Medical School and Hospital of Columbia University; Associate Attending Dermatologist, Montefiore Hospital, New York City, and Jack Wolf, M. D., Attending Dermatologist and Syphilologist, Skin and Cancer Unit of the New York Post-Graduate Medical School and Hospital, Columbia University; Director of Dermatology, New York City Cancer Institute. Cloth, 670 pages. Price, $4.50. The Year Book Publishers, Inc., Chicago, Illinois, 1940.

The reviewer recommends this little volume to all students of dermatology. It is a comprehensive work on the treatment of the more common dermatological conditions, sufficiently detailed to be of practical service in the handling of skin diseases and syphilis, yet not too detailed. While the book primarily concerns treatment, it contains a great deal of information on cutaneous diseases which will help the student and the practitioner to better understand the nature of the disease he is treating, as well as the technique of treatment.

The authors have included chapters on principles of diagnosis, principles of topical medication, and general dermatologic management in the text before taking up the management of specific skin diseases. They have given much information concerning drugs and formulas which should be of considerable service to the busy practitioner. This is an excellent work and should be in the library of every general practitioner who is called upon to treat skin diseases.

[3]**Neoplastic Diseases.** By James Ewing, A. M., M. D., Sc. D., LL. D. Professor of Oncology at Cornell University Medical College, New York City; Consulting Pathologist, Memorial Hospital. Cloth, 1160 pages, with 581 illustrations. Fourth Edition. Price, $14.00. W. B. Saunders Company, Philadelphia and London, 1940.

As a reference book Ewing's Neoplastic Diseases has for years been the most valuable book of its kind in English. The present edition, which has been off the press a few months, in its set-up is much like the older edition. In general, the classifications formerly in use are still present, but some of these have been revised and brought up to date. The data supporting opinions expressed are largely old, and it appears to this reviewer that some newer figures would improve the quality of the text. Most of the illustrations in the new edition have been taken from the older volume, and it seems that more advantage might have been taken of improvements in modern medical art and photography. The very extensive bibliography closing the volume is large, but it needs revision by the addition of references from more modern contributions to pathology.

Among the newer changes are those in the chemistry, the experimental data, and the carcinogenesis of neoplasms. A good many new ideas which have become current in reference to tumors of the central nervous system, the nerve trunks, and the spinal cord are represented in the present edition. There are also changes in information concerning sarcoma, bone tumors, endothelioma, the lymphoma group, monocytic leukemia, tumors of the breast, carcinoma of the islet tissue of the pancreas; tumors of the breast, testes, and lungs; and tumors of the melanoma group. Current ideas about the relationship between the hormones and neoplasms are given some prominence.

The reviewer has for years been using Neoplastic Diseases as a reference text and finds that the present edition reflects the march of progress of medical science and retains its position of leadership made secure by the authority of one of the greatest pathologists of the world.

[2]Reviewed by Leslie M. Smith, M. D., El Paso, Texas.
[3]Reviewed by Charles Phillips, M. D., Temple, Texas.

DEATHS

Dr. J. E. Fuller of Paris, Texas, died July 26, 1940, in a Paris hospital, of cerebral hemorrhage.

Dr. Fuller was born April 1, 1862, in Lamar County, Texas, the son of William and Sarah Beauchamp Fuller. His preliminary education was received in Professor Lyle's Private School, Paris, Texas, and his medical education was obtained in Tulane University School of Medicine, from which he was graduated in 1888. He had practiced at Sumner, Texas, for twenty-eight years and at Paris for twenty-seven years.

DR. J. E. FULLER

Dr. Fuller had been a member continuously in good standing throughout his professional

life of the Lamar County Medical Society, the State Medical Association and the American Medical Association. He was elected an honorary member of the State Association in 1940. He had been a member of the staff of the Sanitarium of Paris for over twenty-five years. His death marked the close of a long and useful career as a physician.

Dr. Fuller is survived by his wife, the former Miss Willie J. Hancock, to whom he was married December 6, 1887. He is also survived by a daughter, Mrs. B. W. Tinnin, also of Paris.

Dr. Sterling Price Boothe of Cuero, Texas, died July 25, 1940, in a San Antonio hospital, of pneumonia.

Dr. Boothe was born near Hochheim in Dewitt County, Texas, in 1884, the son of Mr. and Mrs. L. C. Boothe, pioneer residents of that section of Texas. He was a member of a family of thirteen children. His preliminary education was received in the schools of his community and the Nash Academy at Cuero. His medical education was obtained in the Medical Department of the University of Tennessee, from which he was graduated in 1906. After his graduation he located at Westhoff, Texas, where he practiced until 1916. He then entered the Medical Corps of the United States Army, being commissioned a Captain and stationed at Mitchell Field, Long Island. After the war Dr. Boothe returned to DeWitt County, locating in Cuero, which was his home for the remainder of his professional life. He had taken postgraduate work in New York City.

DR. STERLING P. BOOTHE

Dr. Boothe was a member of the State Medical Association and American Medical Association, first through the Gonzales County Medical Society and after his location in Cuero, through the DeWitt County Medical Society, for thirty-two years. Following the death of Dr. J. H. Reuss of Cuero, he purchased and operated the Reuss Hospital, until it was purchased by the Texas Lutheran Synod and became tne Texas Lutheran Hospital. Since that time he had served as chief surgeon for the institution. Dr. Boothe was an able surgeon and was held in the highest esteem by his medical associates. He had contributed materially to every worth while project for the civic betterment of his community. He was an active member of the American Legion, the Knights of Pythias, the Masonic order, and the Presbyterian Church. Dr. Boothe had given freely of his professional services to the needy, and his death is a distinct loss to Cuero.

Dr. Boothe was married to Miss Belle Jolly of Nashville, Tennessee, in 1906. To this union were born four children. His first wife died in 1918. In 1924, Dr. Boothe was married to Miss Nell Putman of Cuero. Two children were born to this union. He is survived by his wife; four daughters, Miss Louise Boothe, Austin; Mrs. Saint Trout, Laredo; Mrs. Walter Malone, Des Moines, Iowa; and Miss Marjorie May Boothe, Cuero; and two sons, Sterling Boothe, Baytown, and Frank Boothe, Cuero.

Dr. T. A. Sinclair of Houston, Texas, died suddenly July 26, 1940, at his home, of heart disease.

Dr. Sinclair was born February 18, 1873, near Keokuk, Iowa, the son of W. A. and Elizabeth Carter Sinclair. His early education was received in the public schools and in a junior college in Humeston, Iowa. His academic education was completed in Drake University, Des Moines, Iowa. His medical education was obtained in the Keokuk Medical College, Keokuk, Iowa, from which he was graduated in 1905. He began practice of medicine in Humeston, Iowa, where he remained for two years. He then came to Houston, Texas, where he served an internship in the Texas Christian Sanitarium, following which he had been in the active practice of medicine and surgery in Houston for thirty-three years. He had taken postgraduate work in Tulane University, New Orleans, and in radiology in Chicago.

DR. T. A. SINCLAIR

Dr. Sinclair was a member of the Harris County Medical Society, State Medical Association, and American Medical Association, continuously in good standing from 1916 until his death. He was also a member of the Southern Medical Association. He served the city of Houston as a member of its board of health from 1920 to 1928. In 1923 he established the Heights Hospital which has since grown from a building for five patients to a two-story institution with a staff of twenty-five physicians, thirty-nine employees and a fifty patient capacity. Despite the fact that he practiced in a city he was regarded as the "country doctor" type of practitioner greatly beloved by the community which he had served from a population of 4,000 to an important suburban residential district of a thriving city. Dr. Sinclair was a charter member of the Heights Rotary Club and its president at the time of his death. He was a member of the Christian Church, which institution he had served as an elder and as president of its board of directors for five years. He was a Mason, a member of the Scottish Rite, and the Shrine. He was also a member of the Odd Fellows and Woodmen of the World. His death was sincerely mourned by the community he had served faithfully and well.

Dr. Sinclair is survived by his wife, formerly Miss Mary Ella Pyles, to whom he was married October 11, 1905. He is also survived by a son, Thomas A. Sinclair, Jr., and two daughters, Mrs. Elizabeth Zarr and Mrs. Marjorie Louise Synnott, all of Houston.

Dr. **Joseph D. Michie** of Childress, Texas, died suddenly July 15, 1940, at his home, of heart disease.

Dr. Michie was born November 28, 1873, at Elmo, Texas, the son of Robert W. and Rebecca Cunningham Michie. His preliminary education was received in the public schools of his community and the old Add-Ran College at Thorp Springs. His medical education was obtained in the Medical Department of the Fort Worth University, from which he was graduated in 1898. He began the practice of medicine at Heath, Rockwall County, Texas, where he remained eleven years. He then removed to Childress, in 1907, which was his home for the remainder of his professional life.

Dr. Michie was a member continuously in good standing during his entire professional life of the State Medical Association and American Medical Association, first through the Rockwall County Medical Society while living in Heath, and through the Childress-Collingsworth-Hall Counties Medical Society after his removal to Childress. He had served the latter county society as president. He was also a member of the Panhandle District Medical Society. He was held in the highest esteem by his medical confreres and was beloved by his community as a faithful and capable practitioner. He was a member of the Christian Church.

Dr. Michie is survived by two sons, J. D. Michie, Jr., Childress, and T. B. Michie, Iowa Park; two brothers, Tobe Michie, Terrell, and Will Michie, Josephine; and four sisters, Mrs. O. E. Gause, San Benito; Mrs. Jodie Sloan, Dallas; Mrs. H. M. Wade, Rockwall, and Mrs. A. M. Akin, Terrell. His wife, formerly Miss Nora Ferguson, to whom he was married at Iowa Park in 1900, preceded him in death March 9, 1935.

Dr. **Sam Harmon Taylor** of San Antonio, Texas, died June 3, 1940, in a San Antonio hospital, of coronary thrombosis.

Dr. Taylor was born June 28, 1898, in Goliad County, Texas, the son of Roland Sanders Taylor and Lula Lee Cadenhead Taylor. He received his preliminary education in the public schools of his community and Texas Christian University. He enlisted in the United States Navy, July 19, 1918, and was stationed at the Naval Hospital, Mare Island, California, as Pharmacist Mate for the duration of the war. His medical education was obtained in the medical department of the University of Texas, Galveston, from which he was graduated in 1924. He served internships in Providence Hospital, Waco, Texas, and in the Medical Reserve Corps at Base Hospital, Fort Sam Houston, San Antonio, Texas. He began the practice of medicine in San Antonio in 1925, where he spent the remainder of his professional life.

DR. SAM HARMON TAYLOR

Dr. Taylor was a member continuously in good standing of the Bexar County Medical Society, State Medical Association, and American Medical Association from 1926 until his death. He was also a member of the Southern Medical Association. He was an active member of the Christian Church and the Kiwanis Club. He gave unstintingly of his services to the poor and underprivileged through the Mexican Christian Institute, and in private practice. His generosity and kindness were outstanding characteristics. He was interested in all charitable and civic projects, and his sudden and untimely passing is mourned by his associates and his community.

Dr. Taylor is survived by his wife, formerly Miss Evelyn Kerns of Austin, Texas, to whom he was married in 1924, when she was an instructor in the Department of Bacteriology and Preventive Medicine, in the University of Texas School of Medicine, Galveston. He is also survived by a daughter, Arvilla Taylor; his parents, Mr. and Mrs. R. S. Taylor, and a sister, Mrs. W. C. Davis, all of San Antonio.

Dr. **John William Thorn** of Houston, Texas, died April 25, 1940, of diabetes mellitus.

Dr. Thorn was born in Walnut Ridge, Lawrence County, Arkansas, January 11, 1866, the son of Thomas J. and Rebecca Holt Thorn. His preliminary education was received in the public schools of Arkansas and his medical education was obtained in the Beaumont Hospital Medical College, St. Louis, Missouri, from which he was graduated in 1898. He served an internship in the Cotton Belt Railroad Company Hospital, at Tyler, Texas, and was resident surgeon in the Houston Infirmary, Houston, Texas. He began the practice of medicine at Tyler, where he remained until 1903, at which time he moved to Clio, Arkansas, where he lived and practiced until 1910. He then moved to Houston, Texas, which was his home for the remainder of his professional life.

DR. JOHN WILLIAM THORN

Dr. Thorn was a member of the State Medical Association and the American Medical Association through the Harris County Medical Society from 1912 until his death with the exception of 1918. He was elected an honorary member of the State Medical Association in 1936. He was also a member of the Southern Medical Association. Dr. Thorn was chief surgeon of the Houston Belt and Terminal Railway Company from 1913 until his death. He was a member of the Episcopal Church.

Dr. Thorn is survived by his wife, formerly Miss Myrtle Etter of Tyler, to whom he was married April 30, 1903. He is also survived by one son, John W. Thorn, Jr., Houston, Texas; a daughter, Mrs. G. A. Neel, Santa Fe, New Mexico; a sister, Mrs. Josie Flannery, Chandler, Oklahoma, and a brother, Thomas H. Thorn, San Antonio.

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EDITORIAL OFFICES: 1404 W. El Paso Street, Fort Worth, Texas
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Vol. XXXVI **October, 1940** **No. 6**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

The Postgraduate Medical Assembly of South Texas will hold its ninth annual clinical meeting December 3, 4 and 5, 1940, at the Rice Hotel, Houston. The program will be presented along the same lines of previous meetings. There will be general assemblies in the mornings, afternoons and evenings. The only sectional meetings will be those of the eye, ear, nose and throat group, who will hold scientific sessions and separate round table luncheon conferences each of the three days. There will be one General Assembly round table luncheon on the first day, and scientific sessions of the General Assembly following dinner on the evenings of the second and third days. Harris County Medical Society will be host at a dinner with special entertainment the evening of the first day.

The scientific program has been carefully built around the teaching abilities of seventeen qualified guest speakers, who will deliver a total of fifty-nine addresses in addition to the informal discussions at round table conferences. The following are the guest speakers of the 1940 Assembly:

Dr. Horton R. Casparis, Professor of Pediatrics, Vanderbilt University, Nashville, Tennessee.

Dr. Milton B. Cohen, Director, The Asthma, Hay Fever, and Allergy Foundation, Cleveland, Ohio.

Dr. Claude C. Coleman, Professor of Neurological Surgery, Medical College of Virginia, Richmond, Virginia.

Dr. James B. Costen, Associate Professor, Otolaryngology, Washington University School of Medicine, St. Louis, Missouri.

Dr. David M. Davis, Professor of Genito-Urinary Surgery, Jefferson Medical College, Philadelphia, Pennsylvania.

Dr. Charles C. Dennie, Associate Professor of Dermatology, University of Kansas School of Medicine, Kansas City, Missouri.

Dr. John H. Dunnington, Professor of Ophthalmology, Columbia University, New York City.

Dr. Sanford R. Gifford, Professor and Head of Department of Ophthalmology, Northwestern University Medical School, Chicago, Illinois.

Dr. B. R. Kirklin, Director, Division of Radiology and Professor of Radiology, Mayo Foundation Graduate School, Rochester, Minnesota.

Dr. Earl D. McBride, Associate Professor Orthopedic Surgery, Oklahoma University School of Medicine, Oklahoma City, Oklahoma.

Dr. Henry K. Mohler, Dean and Sutherland M. Prevost Professor Therapeutics, Jefferson Medical College, Philadelphia, Pennsylvania.

Dr. George Morris Piersol, Professor of Medicine and Vice-Dean, Medical Graduate School of University of Pennsylvania, Philadelphia, Pennsylvania.

Dr. Floyd T. Romberger, Staff Anesthetist, Lafayette Home Hospital, Lafayette, Indiana.

Dr. Robert A. Ross, Associate Professor of Obstetrics and Gynecology, Duke University School of Medicine, Durham, North Carolina.

Dr. W. Likely Simpson, Professor of Otolaryngology and Head of Department, University of Tennessee College of Medicine, Memphis, Tennessee.

Dr. Harvey B. Stone, Associate Professor of Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland.

Dr. Howard C. Taylor, Jr., Professor of Gynecology, Pennsylvania University School of Medicine, Philadelphia, Pennsylvania.

The Post Graduate Medical Assembly of South Texas is a project of the Eighth, Ninth and Tenth Councilor Districts of the State Medical Association, and as such is the achievement of an integral part of the Association. Its purpose has been not only to bring postgraduate instruction to the doctor at home but to increase membership and interest in the State Medical Association by solidifying the medical profession in the three districts concerned into active, up-to-

date, scientific, doctors of medicine. It is succeeding in this purpose.

The registration fee for the Assembly is $10.00, which covers luncheon, dinners, all of the scientific sessions, and motion pictures. There will be attractive scientific and technical exhibits. This meeting can hardly be surpassed for postgraduate study in a three-day period, not considering the fine fellowship made possible in contact with fellow physicians. It is worthy of the support it has had and will continue to receive.

Medical Preparedness Progress. — Advice from Chicago is to the effect that, taken as a whole, the Medical Preparedness program is proceeding apace. The questionnaires have been coming in quite satisfactorily, although, it seems, not as they should, considering the emergency. The committee in charge had expected that by this time returns would be complete, or so nearly so that the information thus obtained could be tabulated and transferred to punch cards. Not until such is the case can our committee function as the sufficient auxiliary to the Federal Government that it was intended to be.

It would appear that even though the medical profession in a number of states, and in many localities, have appreciated the importance of this movement, and acted accordingly, its full import has not been realized by the profession at large. Particularly is this true as relates to Texas. According to the last tabulation, only forty-three per cent of the questionnaires sent to Texas had been returned. No doubt this percentage has been definitely improved during the past week or so, in view of the number of duplicate blanks that have been requested. Even so, the returns still must be inadequate. Not enough additional blanks have been requested for anything like a hundred per cent return. Our State Committee is very much concerned over the situation, but not at all pessimistic. It is believed that if our doctors can be made to realize that much depends upon the completeness of these returns, they will do their individual and collective part. It cannot possibly be that the medical profession of Texas is any less patriotic than that of any other section of the country. We are certainly as loyal in this State as are the people of any State. It is our view that our failure is not dependent in any part upon our loyalty or patriotism. We may be dilatory, but if so, that is the full extent of our delinquency.

In order to expedite things and secure completion of the questionnaire concerned, our President, upon the request of our Committee on Military Affairs (which is what we call our Committee on Medical Preparedness), has asked county medical societies to appoint subcommittees on military affairs, and quite generally they have already done so. The function of these committees, we may say in passing, is, first, to make certain that each doctor in the State, to the extent that such a thing is possible, accomplish and forward to Chicago, this all important questionnaire. The second, and ultimately most important duty of these committees will be to assume full charge of the military situation in their respective counties as it develops. In order that these two purposes may certainly be accomplished, the President has asked that the county society committees thus appointed, comprise those members who will hardly be called upon to take the field in any military activity, and who are vigorous, active and willing, and able to stand out against any importunities the exigencies of the service may inspire. That is no small order.

It is expected that these committees will, through the help of committees from the Woman's Auxiliary, interview each licensed physician within their respective jurisdictions, in an effort to induce those who have not done so, to answer the questions that have been asked in the much referred to questionnaire. The Woman's Auxiliary has already joined in this movement, with splendid results. It will be understood, and we repeat it, that it is not merely the member of a county society who should be petitioned in this matter, but the licensed physician of whatever status.

If there be those who would be fully advised concerning this movement, it is our suggestion that they refer to the August and September numbers of the JOURNAL, where they will find fairly informative editorials on the subject. They should also refer to the September 14, and September 28, numbers of *The Journal of the American Medical Association.* There are several articles on the subject in those numbers, and the October 5, number of that Journal will carry other such articles, of particular importance in this connection, notably the minutes of a conference of the American Medical Association Committee on Medical Preparedness, State Chairmen, and Representatives of the Government. At this conference a number of pertinent questions were asked and answered. There is entirely too much detail involved to warrant us in any attempt here to fully set out the developments of the Medical Preparedness movement.

Many inquiries have come to the State Committee as to the effect of the "draft" on the medical profession. This matter is discussed fully in an article by Colonel Charles B. Spruit, of the general staff of the Army,

in the September 28, number of *The Journal of the American Medical Association.* Suffice it to say here, that physicians of the draft age (twenty-one to thirty-five) must register on October 16, along with other men of like age. If any of them should finally be selected (and they certainly can be selected and made to train as enlisted men), they will be given the opportunity of taking a commission in the Medical Reserve Corps of the Army. That is about their only out. Having taken a commission, they are subject to call, if and when needed, but not until then. Medical students must register, but they will not be called until July, 1941, if then. This appears to be a ruling of expedience. The Government will certainly not take any steps which will inhibit the production of physicians. Internes and residents will likewise register, but in like manner will not be called until they have completed their service.

The disturbing element entering the present situation, is the difference between training and warfare. Medical Officers in the National Guard and in the Reserve of the Army and Navy, no doubt are willing and anxious to serve their country in case of war, no matter what the sacrifice. It is somewhat different in the matter of training. It is one thing to ask a physician to quit his practice for service with troops during a training period of any considerable length, and something else to ask him to do the same thing in time of war. No doubt there will be many cases of personal imposition in this connection. Nobody seems to know the answer, but it is assumed that the Government does not desire to injure any physician any more than circumstances require. It may be the case that there are enough physicians of military age who have not yet become so well established in practice that they cannot leave the same, or who have attained such a degree of independence that they can afford to take out for a year, to make it unnecessary to call upon those who must, upon the face of it, make supreme sacrifices to do their part in this connection. It may transpire that a feasible procedure, particularly in connection with the reserve, may be evolved whereby Reserve Medical Officers may serve on staggered, short-term basis, thereby calling merely for extended vacations. We don't know. These and other related matters are being considered by the authorities. In the meantime, we are confident that no physician will fail to fully come up to his military and patriotic obligations, whatever they may be.

It is anticipated that there will be a demand for physicians along four distinct lines. It is exactly in this connection that our questionnaire becomes so important and is so necessary. First, there must be a sufficient number of physicians within the so-called military age, qualified, competent and willing to serve, to meet the requirements of our armed forces. Second, there must remain at home a sufficient number of physicians to take care of the civil population. Manifestly, these will come from those of us who are either by virtue of age or physical infirmities not fit for service with troops. Third, there must be set apart physicians with experience in industrial medicine and surgery for service in connection with the very much enlarged industrial enterprises concerned in the production of munitions of war, and fourth, the public health cannot be neglected. Not alone does the civil population depend upon the health officer for protection against many diseases and unhealthful conditions, but the armed forces as well. It is not altogether sufficient that a cantonment or camp of soldiers be protected against disease, and insanitary conditions within their areas, but as well from the same objectionable conditions outside. There are many other reasons for the segregation and service of specialists in public health. It is believed that our Committee, acting under the direction and supervision of the authorities at Washington, and through the coöperation of the medical profession can insure that these groups are segregated and registered and whatever is necessary to enable them to function as intended.

One very important objective sure to be attained as a result of this tabulation, will be that thus physicians may be, whether or not they actually are, assigned to the type and character of service that they are best fitted to render, and would prefer rendering. It will be recalled that there was much dissatisfaction during the other World War in this particular. Physicians of the highest possible rating in the specialties, who would be most useful to the service in their respective fields, were assigned to less important service of a sort they too frequently were not, in fact, competent to render. A certain amount of that sort of thing may be expected to happen under the best arrangement possible to be made, but in the World War it appeared to be the case so often as to become notorious. The physician who enters the Army from civil life may not be expected to be so adaptable in the requirements of the medical service of the Army as the physician trained in the Army itself. It appears that those in the Army appreciate this fact, fully, and it is promised that if we will get the data, and insure the coöpera-

tion of the prospective components of the Medical Corps of any of the armed forces, something will be done about it.

The data is what we are trying to get now, and the questionnaire is the only practicable method of doing this of which we know.

Medical Service for the Draft Boards, or under the Selective Service law, will be rendered by physicians nominated by the Governor of the State and approved for such service by the President of the United States. Under the selective service law, at least one physician, perhaps two, in accordance with need, will be thus selected for each draft board, for the purpose of making preliminary physical examinations of those selected for military service. There will be a number of so-called Advisory Boards made up entirely of physicians from the several specialties concerned most directly with physical examinations, and one physician for each of a number of Appeal Boards. It is required that, to the extent possible, physicians selected for this service be not available for field service with the armed forces, which means that they must be beyond the military age, and not too old, or with some physical disability.

Contrary to our early information, none of these physicians will be paid for their services. As a matter of fact, the Boards in Texas are not going to require so many physical examinations in the first round. Enough of our young men have volunteered for service to cut down our quota materially. Even so, there will be those to be examined, and examiners for our Boards may expect to be kept busy for a time. The so-called Advisory Boards will not function except where there is a disagreement between the Boards and the draftees, as to the results of their first physical examinations. Such cases will be referred to such Boards. In the instance there is still dissatisfaction on the part of any concerned, as to either physical status or economic factors, there are the Boards of Appeal, the decisions of which are final. Upon each of these Boards, as we have said, there is a physician.

It is understood that the physical standards set up for the draftee are those of the particular service to which the draftee is to be assigned for training. The Army requires that a soldier, after having been hardened, must be able to walk fifteen or twenty miles in a day, carrying fifty pounds on his back, without harm to himself. Any physical condition which will prevent this will exclude such individual from the service. No provisions have so far been made for accepting into the service men with correctible defects. Thus it will be seen that a dilemma is set up. A draftee who very much desires to enter training may do so by having such disabilities removed. If he does not want in the service, he won't do anything of the sort. That means a variation from the physical examination standards during the last War, of course. In the instance war should be declared, quite probably draftees with minor defects will be accepted, and the necessary corrections made after they are inducted into the service. Quite probably there will be a surplus of draftees, in view of the provision of the draft law that not more than 900,000 men can be in training at any one time. The Government can afford to be choosey.

In the selection of the medical personnel for the selective service in Texas, the Governor, through the Adjutant General of the State, consulted the State Secretary. A surplus of physicians for Draft Board service was set up. We are advised that the list as thus compiled has been approved, and all nominees will be appointed. Great care has been exercised by the Government in this connection, in order to insure the medical competency and professional integrity of those selected for this very important service.

If and when a draftee is accepted by the local Board for induction into the service, he is not immediately in the service, as was the case in the other War. There will be set up a number of so-called Induction Boards before which boards those thus selected will be caused to appear for still another physical examination. These boards will, for the most part, be located within the vicinity of training camps and army stations, or near the centers of population. The composition of these boards will be pretty much that of the so-called Advisory Boards. There will be internists, surgeons, orthopedic surgeons, eye, ear, nose and throat specialists, neuropsychiatrists and clinical pathologists. These boards, unlike the other boards connected with the draft, will be on a continuous, whole-time service, for limited periods of time, for which their members will be paid.

It is anticipated that they will receive the pay, with allowances, of a Major in the Army. According to the present estimate, from twenty to thirty days following each call will be required for service on each such board. In view of the difference in continuity of service between this and the other boards, for which reason members will be on a pay status, volunteers are called for. Any physician practicing any of the specialties of medicine here noted, who would like to render this service, should very promptly

communicate with the office of the State Medical Association, 1404 West El Paso Street, Fort Worth, Texas. Either that, or with the Committee on Medical Preparedness of the American Medical Association, at 535 North Dearborn Street, Chicago, Illinois, preferably the former.

A Report on Health and Accident Insurance for Texas physicians prepared by our Council on Medical Economics, after considerable investigation, is published elsewhere in this number of the JOURNAL. This report is a result of instructions given the Council on Medical Economics at the last annual session. The purpose of the requirement is that Texas physicians may have some way of knowing whether an insurance company offering health and accident insurance to the medical profession as a group, is reliable, and the policy thus offered is sound and satisfactory. There are so many opportunities for fraud, or at least for misleading promises in such matters, that it seems wise that something of the sort be done.

By reading the report to which we are calling attention, it will be noted that two such insurance companies have submitted data to the Council, and that both companies and their group policies have been approved. A brief report is made upon each company and the policy it offers. It occurs to us that this is a worth while service.

DANGER OF INHALING STOMACH CONTENTS

One of the most frequent causes of lung complications following operation or in persons in whom the normal protective reflexes of the windpipe and bronchi are impaired is due to the breathing into the lung of regurgitated stomach contents, Ernest E. Irons, M. D., and Carl Wesley Apfelbach, M. D., Chicago, point out in *The Journal of the American Medical Association* for August 24.

The condition is frequently fatal and is called aspiration bronchopneumonia.

A history of hiccupping, retching and nausea, the authors say, is elicited more frequently than vomiting in these pneumonias. This, they explain, may be due to the fact that patients able to vomit vigorously are more often in possession of active reflexes and are better able to expel such foreign material as enters the windpipe. Continuous removal by mechanical suction of the contents of the stomach before operations has reduced the incidence of this form of pneumonia.

DIETARY HABITS

Diet may play a part in causing many other ailments besides those commonly recognized as dietary deficiency diseases, *Hygeia, The Health Magazine* points out. Among these are certain forms of heart disease, hardening of the arteries, arthritis, chronic stomach trouble, diabetes and occasionally an unexplained headache. It has been found that a change in the dietary habits of patients suffering from these diseases to a diet termed "protective" not only mitigated their distressing symptoms but actually restored the soundness of the injured tissue.

ANEMIAS OF THE NEWBORN PERIOD*

BOYD READING, M. D.
GALVESTON, TEXAS

The obvious causes of anemia in the neonatal period, namely, syphilis, sepsis, loss of blood, and physiologic anemia, while in themselves important, are well known and easily recognized. They offer no particular problem in diagnosis and treatment.

A group of less well understood diseases occurs in this period of life with anemia as part of the clinical picture. Formerly they were looked upon as separate entities, but available information indicates that they are manifestations of a single disease process occurring in various degrees of intensity. The purpose of this communication is to discuss these conditions, to point out the characteristic features of each, to emphasize their points of similarity and to report five cases. The syndromes to be discussed are universal edema of the fetus, icterus gravis neonatorum, and congenital anemia of the newborn. Recent observers group these conditions under the term erythroblastosis fetalis.[1]

UNIVERSAL EDEMA OF THE FETUS (HYDROPS CONGENITUS UNIVERSALIS)

A stillbirth, or death soon after birth, is the inevitable outcome in cases of universal edema. The fetus shows a generalized hydrops. There is pallor, and at times, mild icterus. Jaundice, however, is not a prominent feature. The blood from the heart shows increased numbers of immature erythrocytes. Extramedullary centers of hemopoiesis are found in the liver, spleen, kidneys, pancreas, thymus, and other viscera. In addition, these infants have an enlarged liver and spleen. Edema of the placenta is usually present. The condition is incompatible with life.

ICTERUS GRAVIS NEONATORUM

The infant is usually jaundiced at birth or becomes so within a few hours following birth. The vernix caseosa as well as the amniotic fluid is often of a golden yellow color (50 per cent). In more than half of the cases, the placenta is enlarged. The jaundice deepens rapidly. In addition to jaundice, severe anemia characterized by pallor of the mucous membranes is present. Hepatomegaly and frequently splenomegaly occurs. The infant refuses to nurse. It may be excessively irritable or somnolent. Clonic spasm, opisthotonus, and convulsions may occur. Hemorrhage into the skin from the mucous membranes and in the viscera is common.

*Read before the Section on Clinical Pathology, State Medical Association of Texas, Dallas, May 14, 1940.

Clifford[2] reports that icterus gravis occurs in one out of 340 newborn infants. Andrews[3] reports the incidence as being one in 490 births.

Findings of great diagnostic importance occur in the blood. Both the red blood cells and hemoglobin are reduced as low as 400,000 in the former and from 12 to 20 per cent in the latter. The anemia is of the macrocytic, hyperchromic type. The reticulocytes are usually moderately increased (10 to 15 per cent), but with the onset of recovery, the number is markedly increased over the above values. Leukocytosis is always present, at times reaching 25,000 to 50,000 per cubic millimeter of blood. Care should be taken in counting white cells not to mistake the nuclei of erythroblasts and normoblasts for leukocytes.

A marked increase occurs in the number of immature red blood cells. The count may exceed 100,000 per cubic millimeter. Elevated icterus index, increased amounts of urobilin, and the biphasic van den Bergh reaction are indications of hemolysis. The clotting and bleeding times are prolonged. At necropsy extramedullary centers of hemopoiesis are found. Thrombocytopenia is the rule.

CONGENITAL ANEMIA OF THE NEWBORN

Two types are encountered: (1) that associated with an embryonal blood picture and characterized by erythroblastemia; (2) an aregenerative or hypoplastic type.[4] As the names suggest, the distinguishing features of the two are the presence in the former of immature erythroblastic elements and their absence in the latter. Clifford[5] states that in cases of congenital anemia of the newborn without erythroblastosis, a possible mechanism may be the premature separation of the placenta or a placenta previa. He suggests that the fetal villi as well as the maternal villi are involved, resulting in a loss of fetal as well as maternal blood and in some cases at least, explaining the anemia thusly. On about the fifth to seventh day of life the infant develops a sheet-like whiteness. The mucous membranes are pale, the liver and spleen frequently show enlargement, and in addition to the severe anemia, a small number of infants develop mild icterus, edema, or both. In the embryonal type, many immature red blood cells are found in the circulating blood. These are not as numerous as in cases of icterus gravis, but they are nevertheless present in excessive numbers. In fatal cases, extramedullary centers of hemopoiesis are found in the abdominal viscera. The aregenerative or hypoplastic type of congenital anemia differs from the form just described in that no regenerative changes are found in the circulating blood. Dwyer and Neff[6] have recently grouped the anemias of the newborn under the following headings: (1) *Erythroblastic - Hemolytic Anemia of the Newborn;* (2) *Non-Erythroblastic Anemia of the Newborn;* (3) *Hypoplastic-Aplastic Anemia of the Newborn.*

Most of the cases of universal edema of the fetus, icterus gravis neonatorum, and congenital anemia of the newborn, have in common: (1) anemia; (2) erythroblastosis; (3) jaundice; and (4) edema. A still more important feature which is common to all is a marked familial tendency. De Lange[7] reports on a mother who lost two children with icterus gravis and then was delivered of twins, one of which had icterus gravis and the other, universal edema.

There may be successive abortions with occasional instances of hydrops or jaundice. Anemia may replace both jaundice and hydrops. Pasachoff and Wilson[8] report a case of congenital anemia following which two subsequent pregnancies in the same mother resulted in stillborn infants with universal edema. Many more instances could be cited illustrating the familial features and showing the relationship of these clinical syndromes. In general, it may be said that a woman may give birth to a child with erythroblastosis, yet subsequent pregnancies may result in normal children. Usually, however, if an infant with erythroblastosis is born to a woman, the chances are better than 50 per cent for a return of the same condition in subsequent pregnancies. After the birth of two or more children with erythroblastosis and severe icterus gravis, the chances are better than 70 per cent for recurrences.[9]

ETIOLOGY

The cause of erythroblastosis fetalis is not known. Josephs[10] points out that infection as a factor in etiology is unlikely because of the familial nature of the disease. Syphilis has been excluded in all reported cases. Josephs also states that intoxication can play no part because of necessity it must originate on the fetal side of the placenta or else the tissues of the mother would have to be immune to its action. Abt[1] believes that the disease results because of embryonal persistence of hemopoiesis of red cells in various organs. The reasons for the failure of blood forming organs to assume their normal extrauterine function are not explained. The persistence of extramedullary hemopoiesis should not be construed in terms of a compensatory mechanism since the bone marrow in erythroblastosis fetalis does not show any changes indicative of its incapacity of normal function. It is known that during the neo-

natal period, a striking change takes place in the hemopoietic centers. The centers of extramedullary activity which function during intrauterine life normally disappear rapidly after birth as do also the erythroblasts and the normoblasts from the circulating blood.

The inability of the body to stabilize its blood forming powers would therefore be the most reasonable explanation for the production of erythroblastosis fetalis. In this connection it must be understood that such infections as syphilis may produce a clinical picture almost identical in all its phases to that of erythroblastosis fetalis. The same is true in some cases of congenital cardiac anomalies. Josephs[10] states "there is scarcely a thing that is considered characteristic of anemia of the newborn with icterus gravis and erythroblastosis that does not occur normally. The difference is rather quantitative than qualitative." Diamond[1] and his associates believe that erythroblastosis fetalis is a disturbance of metabolism of the hemopoietic system causing overgrowth of immature erythrocytes. Contrary to the opinion held by English observers, hemolysis is not the primary factor responsible for the increased erythrogenic hemopoiesis. Until a more thorough understanding of the physiology of the blood is available, the cause of erythroblastosis fetalis must remain obscure. Darrow[11] is of the opinion that an antigen antibody reaction offers the best explanation for the etiology of the syndrome.

PROGNOSIS

The prognosis of erythroblastosis fetalis depends upon the stage or phase of the disease encountered. As mentioned previously, universal edema of the fetus is incompatible with life.

Cases of severe icterus with erythroblastosis (icterus gravis neonatorum) will vary in their response to therapy according to the time of the appearance of jaundice. In general, the more slowly the jaundice appears following the birth of the infant, the better the prognosis. In those cases in which there is intense jaundice at birth, the mortality rate is 70 per cent or more. The infants that show anemia only, even though erythroblastosis be present, practically all recover except those with a hypoplastic bone marrow. Some recover spontaneously. In fatal cases of erythroblastosis fetalis, death occurs usually during the first twelve days. When life is prolonged beyond this period, a recovery ordinarily results.

A group of infants who have experienced a severe jaundice may develop spasticity, convulsions, and mental deterioration as a result of icteric staining of the basal nuclei of the brain. This condition is known as kernicterus. The symptoms may manifest themselves during the period of jaundice or may appear as late as the fifth month. Kernicterus does not as a rule follow jaundice due to other causes although it has been noted in exceptional instances. Strong[14] has suggested that the lenticular degeneration in Wilson's disease may have its inception in kernicterus.

PROPHYLAXIS

Many attempts have been made to prevent the births of abnormal infants in women who have previously given birth to babies suffering with some form of erythroblastosis fetalis. There have been no consistently good results. Diamond[9] reports one instance, unconfirmed, in which a mother who had previously given birth to babies with erythroblastosis, after treatment with whole liver extract gave birth to normal babies, but when therapy was stopped, subsequent pregnancies resulted in the birth of infants with erythroblastosis fetalis.

TREATMENT

It is quite possible that erythroblastosis fetalis is a self-limited disease.[10] At times, in spite of repeated transfusions, death results. During the active stages of the disease, the effects of transfusion may be of extremely short duration. As has been previously pointed out, many cases of severe anemia without jaundice recover spontaneously. When recovery from either icterus gravis or from congenital anemia occurs, it is as a rule permanent. There is no further tendency to either hemolysis or erythroblastosis. Recovery may occur after a period of two months or it may be prolonged indefinitely as in cases of hypoplastic anemia. The most effective method of treatment is by intravenous transfusion of blood. Diamond[9] points out that it is unwise to keep the level of red blood cells up to four and one-half or five million. A level of from two and one-half million to three million is adequate. Frequent small transfusions are more effective than larger amounts of blood. The chief function of transfusion is to tide the patient over the period during which blood destruction and faulty blood formation exists. Too frequent transfusions may increase hemolysis. It has been shown that by properly spaced blood transfusions, the mortality of erythroblastosis may be greatly reduced. In a series of cases reported by Diamond,[9] a reduction of mortality from 33.3 to 7 per cent was accomplished over a period of five years. A case of anemia of the newborn has been reported which responded immediately to injections of liver

extract.[13] Large doses were used; 1 cc. of concentrated solution was given at forty-eight hour intervals. Ordinarily, neither liver nor iron therapy has been useful in erythroblastosis until recovery has started at which time they have the same effect as in postinfectious anemia, in that they hasten hemopoietic stimulation as manifested by a substantial increase in reticulocytes.

Intramuscular injections of blood are uncertain and should not be relied upon in the treatment of erythroblastosis fetalis. Stanford[14] states that in two of his unpublished cases recovery has followed the intraperitoneal transfusion of blood. In each instance, the father's blood was used, uncitrated. This method, however, should be used only when unsurmountable obstacles to the intravenous route are encountered. In Stanford's cases, the injections were given within 12 hours after birth.

REPORT OF CASES

Case 1. A female infant was seen at the age of two weeks because of intense jaundice which had started on the second day of life and increased gradually in intensity. The infant was an only child. The mother had had no stillbirths and in no other members of the family had children been born who were deeply jaundiced. The obstetrician who delivered the baby did not remember any abnormal color of the vernix caseosa and amniotic fluid. The parents of the child were healthy.

The baby was deeply jaundiced. In spite of the intense icterus, the mucous membranes were pale. No petechiae were seen in the skin and there were no evidences of bleeding from the mucous membranes. The temperature was normal. There was a systolic murmur heard at the base of the heart. The transverse diameter of the heart was moderately increased. The liver edge was palpable a fingers-breadth below the costal margin. The edge of the spleen could not be palpated. The lymph nodes were not enlarged. The urine was bile stained. The stools contained bile.

Blood Studies. Sept. 1, 1939 (admission date), a blood count showed red blood cells, 1,240,000; white blood cells, 28,450; hemoglobin, 28 per cent; polymorphonuclear neutrophiles, 25 per cent; lymphocytes, 73 per cent; mononuclear cells, 2 per cent. Many immature red blood cells were seen in the stained smear. There were 290,920 nucleated red blood cells per cubic millimeter of blood. Reticulocytes numbered 16 per cent. The red cells showed pallor, anisocytosis, polychromasia. The majority of the cells were macrocytes.

Sept. 2, 1939, the red blood cells were 950,000; white blood cells, 24,200; hemoglobin, 23 per cent; polymorphonuclear neutrophiles, 48 per cent; lymphocytes, 46 per cent; mononuclear cells, 4 per cent; eosinophiles, 2 per cent; reticulocytes, 18 per cent.

Sept. 3, 1940, the red blood cells were 2,630,000; white blood cells, 26,250; hemoglobin, 52 per cent; polymorphonuclear neutrophiles, 70 per cent; lymphocytes, 30 per cent; nucleated red blood cells, 15,000 per cubic mm.

Sept. 4, 1939, the red blood cells were 2,520,000; white blood cells, 13,000; hemoglobin, 55 per cent; polymorphonuclear neutrophiles, 55 per cent; lymphocytes, 34 per cent; large mononuclear cells, 7 per cent; eosinophiles, 4 per cent; 1,400 nucleated red blood cells per cubic mm. of blood.

Sept. 7, 1940, the red blood cells were 3,700,000; white blood cells, 12,900; hemoglobin, 78 per cent; polymorphonuclears, 15 per cent; lymphocytes, 79 per cent. The differential count was normal. The icterus index was 100; the van den Bergh, delayed direct reaction (35 units of bilirubin); and urobilin was greatly increased in the urine.

Treatment. A transfusion of 60 cc. of citrated blood was given intravenously on the day of admission. On the following day, 50 cc. of citrated blood was given by intravenous transfusion. Apparently complete recovery followed. At the age of 5 months, however, the infant became irritable, tended to draw its head back and showed some evidences of spasticity with hyperactive reflexes. The child made no effort to sit alone nor to reach for or hold objects. It was felt that these symptoms in all probability were manifestations of kernicterus.

Case 2. A white male infant was delivered spontaneously after a precipitate birth. On the second day of life, jaundice was noted. On the fifth day, in addition to the jaundice, a rather marked pallor was noted.

The parents had one older child in good health. The mother had had no miscarriages. The family history of both the father and the mother revealed no instances of stillbirths, jaundice, anemia, or edema.

At the age of 5 days, the infant was admitted to the hospital. The jaundice was intense. The mucous membranes were pale and a marked pallor of the skin could be detected in spite of the existing jaundice. The urine voided during the examination was bile stained. The stools were of normal color. A soft systolic murmur was present and was heard best over the base of the heart. The transverse diameter of cardiac dullness was increased. The lower border of the liver reached to the level of the umbilicus. The spleen was enormously enlarged, the lower border reached the crest of the ilium. The umbilicus showed no evidence of infection. The rectal temperature was 98.6° F. The baby was mentally alert and nursed fairly well. There were no petechial hemorrhages or ecchymosis in the skin and there was no evidence of bleeding from the mucous membranes. A note was made by the obstetrician to the effect that the amniotic fluid was of a brown color, but the vernix caseosa was described as being normal. The child weighed 8 pounds and 6 ounces at birth.

Laboratory Data. A blood count showed: erythrocytes, 1,330,000 per cubic mm.; leukocytes, 24,000 per cubic mm.; hemoglobin, 33 per cent; neutrophiles, 86 per cent; lymphocytes, 12 per cent; nucleated red blood cells, 90 per 100 leukocytes. The stained smear revealed myelocytes 12 per cent; myeloblasts 27 per cent; juvenile forms from 12 per cent to 15 per cent.

Urinalysis showed albumin trace, sugar 0. The sediment showed a few leukocytes. Urobilin was present in the urine.

The infant received two intravenous transfusions, each 100 cc., of citrated blood at intervals of forty-eight hours. Jaundice disappeared completely a week following the last transfusion. Normal blood findings have been maintained since. The child is now aged 3 years.

Case 3.—A male infant was born spontaneously after a normal labor. The baby breathed spontaneously. The weight was 3650 Gm. He became jaundiced within six hours after birth. In addition to jaundice, pallor of the mucous membranes was marked. He vomited blood shortly after birth and passed several bloody stools. He refused to nurse. The liver and spleen were enlarged, extending halfway to the level of the umbilicus. Small petechial hemorrhages were noted in the skin over the shoul-

ders and arms. The urine voided was deeply bile stained. The vernix caseosa and amniotic fluid were canary yellow in color. No note was made as to the size of the placenta.

This was the mother's third pregnancy. The first child is living and in good health. The secondary pregnancy resulted in the birth of twins (Cases 4 and 5). The male expired on the third day with intense jaundice and petechial hemorrhages. A few hours later the female died with similar symptoms. The third pregnancy resulted in the birth of the patient under discussion. This child lived for twenty-three hours. Blood taken from jugular vein following death showed 350,000 nucleated red blood cells per cubic mm. of blood.

Necropsy Report.—The body was that of a well developed, well nourished male infant, age 23 hours. The body weighed 3,400 gm. There was a generalized marked icterus of the skin and mucous membranes. There were many small petechiae in the skin over the shoulders, neck and face. There were a few petechial hemorrhages beneath the visceral pleura over the lungs. The thymus was in its normal position and was average normal size. There were petechial hemorrhages, small in size, in the epicardium over the heart. The liver extended below the costal margin for a distance of approximately 3 cm. The spleen was also enlarged. The spleen was enlarged and firm. On section the spleen was slightly tinted from the generalized icterus. On opening the bile ducts no areas of obstruction were found. The ducts were apparently normal in calibre. The liver was moderately enlarged. It weighed 225 Gm. On opening the cranial cavity, and removing the brain, considerable blood was found around the medulla oblongata, and a portion of the cerebellum. On section through the brain, diffuse petechial hemorrhages were found in the brain substance, and, also, blood and blood clot within the ventricles of the brain. Grossly, the bone marrow showed essentially no abnormalities. The marrow in the vertebral bodies and in the ribs and sternum was red marrow.

Microscopic Findings.—The follicles were reduced in number and quite small. Sinusoids contained a moderate number of blood cells. The reticulo-endothelial cells contained large amounts of fine and coarse granules of brownish pigment which microscopically resembled hemosiderin. Scattered areas of erythropoiesis were seen. The liver cells contained a granular pigment, and some of the bile canaliculi were filled with plugs of bile pigment. The phagocytic cells in the sinusoids also contained bile pigment. Scattered throughout the section were islands of hemapoietic tissue. The thymus showed some areas of hematopoiesis, along with a few collections of myelocytes. There were small areas of hemorrhage into the substance of the brain cortex and also into the substance of the cerebellum. This was more marked, however, in the cerebral cortex. There was active hematopoiesis in the bone marrow. Both the erythropoietic and myeloblastic elements being present. Seemingly, the erythropoietic activity predominated. The megakaryocytes were not numerous.

CASE 4 (Bt. twin No. 2). *Necropsy Report.*—This boy was born immediately following the birth of the female twin. His birth weight was 2,450 Gm. The delivery was made on the eighth month of gestation. The color of the amniotic fluid and vernix caseosa was not mentioned in the notes. Aside from jaundice, nothing of importance was found by the attending obstetrician. Jaundice was noted on the second day of life. The baby was found dead in the incubator on the third day of life.

The body was that of a white, male infant of about eight months gestation. It was 45 cm. in length and weighed 2,130 Gm. There was an icteric tint to the skin. The spleen was swollen, dark in color and soft in consistency. The liver was normal in size and soft in consistency. There was no fibrosis in the liver.

Microscopic Findings.—The germinal centers of the spleen were small and numerous. Many of the sinusoids contained red blood cells. The reticulo-endothelial cells contained large coarse granules of brownish pigment. A few areas of hematopoiesis were seen. The hepatic cells were cloudy, granular and swollen. Numerous small islands of hematopoietic tissue were scattered through the liver substance. The sinusoids contained many red cells and the liver cells contained little fine, brownish granules, apparently hemosiderin. A few of the bile canaliculi contained some lighter staining bile pigment. A small hemorrhage was present in the pelvis of the kidneys and the interstitial tissue of the pyramids showed a rather diffuse yellowish staining. A small area of hematopoiesis was present near the pelvis. Several small areas of hematopoiesis were present in the thymus, and some of the blood vessels were cut longitudinally and were seen to contain numerous nucleated red cells.

CASE 5 (Bt. twin No. 1).—This girl was born December 26, 1934, following a breech delivery. Her birth weight was 2,310 Gm. The period of gestation was eight months. The appearance of the amniotic fluid and vernix caseosa was not noted. On the second day following birth, jaundice appeared. The baby nursed well. On the third day of life she suddenly developed dyspnea. A loud, systolic murmur was heard over the base of the heart. No edema of the tissues was mentioned in the hospital record. The liver and spleen were not enlarged. The lungs were well expanded. Death occurred on the third day of life. Neocropsy was not performed. The cause of the death was attributed to prematurity.

COMMENT

The first three cases represent rather typical examples of icterus gravis with erythroblastosis. The cause of the death of the twins (Cases 4 and 5) is doubtful. However, since this pregnancy was followed by the birth of a child who undoubtedly had icterus gravis with erythroblastosis, it would seem reasonable that the twins also had icterus gravis, but there is not sufficient evidence in the meager history and physical examination nor in the necropsy report of one of the twins (No. 2) to support the conclusion. The presence of numerous nucleated red blood cells in a longitudinal section of a blood vessel in the thymus gland in twin number 1 is of importance in this connection, as are also the areas of hemapoiesis found in the thymus gland, kidneys, liver and spleen. However, it is realized that moderate extramedullary hemapoiesis may be a finding of no importance in a premature birth of this age.

SUMMARY

In addition to a general discussion of erythroblastosis fetalis, three cases of icterus gravis with erythroblastosis are reported, one with a complete necropsy report. Brief summaries of the case histories of twins (brother and sister of patient in case 3), including a necropsy report of one of them, is added. In the necropsy report mention is made of

numerous nucleated red blood cells present in a longitudinal section of a blood vessel in the thymus gland along with moderate extramedullary hemapoietic activity in the kidneys, liver and spleen. Since these babies were also jaundiced, it is highly probable that they too died of icterus gravis.

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2202 Avenue M.

ABSTRACT OF DISCUSSION

Dr. Roy R. Kracke, Atlanta, Ga.: Erythroblastic disorders of newborn infants as well as still-born and some that are premature probably belong in the general category that usually is designated as erythroblastosis fetalis. There is considerable confusion in the literature about these jaundiced states of the newborn. As Dr. Reading has justifiably emphasized, these anemias as well as edema of the newborn, congenital hydrops fetalis, icterus gravis, and congenital anemia, are probably all manifestations of the same underlying disorder. Dr. Reading has pointed out that multiple hemorrhage may be found in some of these, and it is quite possible that the unilateral hemorrhagic necrosis of the adrenal gland occasionally seen in the still-born infant may be on this basis.

In erythroblastic diseases of the newborn it is obvious that the same basic findings are always present, that is, the presence of excessive numbers of circulating erythroblasts, and the deposition of these erythroblasts in the fixed tissues, although there is some question as to whether these areas of erythroblasts in fixed tissues are there because of deposition from the increased number in the circulating blood, or whether they are actually areas of extra-medullary hematopoiesis. That cannot be settled with absolute certainty.

Etiology of this syndrome is unknown, but as Dr. Reading has pointed out, several things have been suggested. The fundamental disorder seems to be an extremely active bone marrow, with perhaps additional erythroblastic production from these additional erythropoietic centers, so that the clinical picture is the result of excessive destruction of these immature circulating cells. Thus there is a rather paradoxical situation in which there is evidence of extreme stimulation of hematopoietic tissue, as shown by the jaundice, and so forth. So then, is this a disease primary in the hematopoietic centers with increased destruction of the immature cells, or the primary action of a powerful hemolytic agent followed by erythroblastic compensatory activity?

An important practical point is this question of mistaking nucleated red cells for white cells and including those cells in the leukocyte count. Of course it requires cytological study of the smears to make the differentiation and to correct the leukocyte count.

The essayist mentioned Dr. Dyer's case which was reported last fall, in which transfusion failed to cure a baby but apparently liver extract did. That introduces the question of the possible value of liver in addition to transfusions. Early diagnosis in this disease is important so that treatment can be started in the form of repeated transfusions.

THE EFFECT OF DRUGS ON THE HEMATOPOIETIC SYSTEM*

MOISE D. LEVY, M. D., F. A. C. P.
HOUSTON, TEXAS

The hematopoietic system of the normal adult is best visualized by referring to a chart prepared by Haden.[5] Fig. 1. Here we see that hematopoiesis is the result of the combined and the coördinated activity of the bone marrow—represented in the chart by the thoracic cage, the spleen, the lymph glands, stomach, liver, reticuloendothelial cells, and the circulating blood. Disorders of the blood affect only the erythrocyte, leukocyte, thrombocyte, and the clotting ferments, the cell changes being manifested by an increase or decrease in number, or by qualitative changes. Haden[6] has classified these changes as shown in Table 1, showing briefly what may occur to the erythrocyte, the leukocyte, and the thrombocyte.

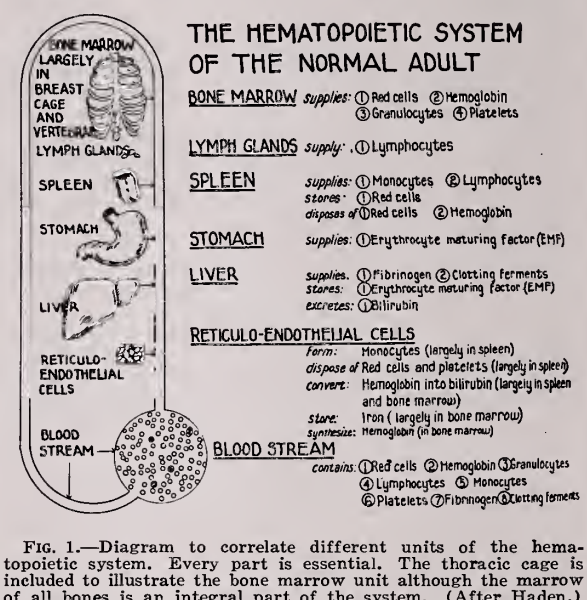
THE HEMATOPOIETIC SYSTEM OF THE NORMAL ADULT
BONE MARROW LARGELY IN BREAST CAGE AND VERTEBRAE
LYMPH GLANDS
SPLEEN
STOMACH
LIVER
RETICULO-ENDOTHELIAL CELLS
BLOOD STREAM
BONE MARROW supplies: ①Red cells ②Hemoglobin ③Granulocytes ④Platelets
LYMPH GLANDS supply: ①Lymphocytes
SPLEEN supplies: ①Monocytes ②Lymphocytes stores: ①Red cells disposes of: ①Red cells ②Hemoglobin
STOMACH supplies: ①Erythrocyte maturing factor (EMF)
LIVER supplies: ①Fibrinogen ②Clotting ferments stores: ①Erythrocyte maturing factor (EMF) excretes: ①Bilirubin
RETICULO-ENDOTHELIAL CELLS form: Monocytes (largely in spleen) dispose of: Red cells and platelets (largely in spleen) convert: Hemoglobin into bilirubin (largely in spleen and bone marrow) store: Iron (largely in bone marrow) synthesize: Hemoglobin (in bone marrow)
BLOOD STREAM contains: ①Red cells ②Hemoglobin ③Granulocytes ④Lymphocytes ⑤Monocytes ⑥Platelets ⑦Fibrinogen ⑧Clotting ferments

FIG. 1.—Diagram to correlate different units of the hematopoietic system. Every part is essential. The thoracic cage is included to illustrate the bone marrow unit although the marrow of all bones is an integral part of the system. (After Haden.)

*Read before the Section on Clinical Pathology, State Medical Association of Texas, May 14, 1940.

The present discussion is limited to the effects of drugs upon the hematopoietic system, and these changes are usually evidenced by either a decrease or an increase of the formed elements of the blood. It is of course obvious that, as a result of the decrease of the formed elements of the blood, certain

TABLE 1.—*Disorders of the Blood (after Haden).*

I.	Affecting the erythrocyte:
	1. Anemia.
	2. Polycythemia.
	3. Qualitative changes (abnormalities in size, shape, hemoglobin content, and maturation of red cell).
II.	Affecting the leukocytes:
	1. Leukocytosis.
	2. Leukopenia.
	3. Qualitative changes (abnormalities in maturity, in granules, and in ferment content).
III.	Affecting the thrombocyte (platelet):
	1. Thrombocytosis.
	2. Thrombopenia.
	3. Qualitative changes (such as increased resistance to dissolution in hemophilia).

serious symptoms develop, and it is with these changes that we are concerned. Mention will be made, however, of the drugs producing an increase of the blood elements.

A decrease of the cells in the blood may result from either a destruction of the formed cell in the peripheral blood stream faster than these can be supplied, or it may result from a depression in the rate of formation of the cells.

The average life of the red blood cell after entrance into the circulation has been variously estimated as from twenty-five to seventy-five days, while the life of the white blood cell and platelet is from one to four days. Drugs producing hemolysis of the erythrocyte manifest their effect very rapidly, while those drugs acting as a depressant on the hematopoietic system produce chronic and slowly appearing changes, because of the long life of the erythrocyte. The opposite is true of those drugs affecting the leukocyte and thrombocyte. A depression in the formation of these cells or of their entrance into the peripheral circulation produces, because of their short life, an extreme grade of leukopenia or thrombocytopenia, with their accompanying acute symptoms.

It is rather surprising to consider that it is only during the past decade that there has been conceived the idea that certain ordinarily useful drugs may, on repetition of normal doses, cause unexpected profound and sometimes fatal idiosyncratic reactions of the blood cells and hematopoietic tissues. Simple toxic reactions were formerly supposed to account for the hematologic injury resulting from the use of such drugs as lead, mercury, arsenic, phenylhydrazine, benzene, and so on. Stokes[11] had, however, in 1926, suggested that the reactions from arsphenamine were probably the result of an idiosyncracy to the drug. It was not until 1930, that, as a result of the universal interest stimulated by that apparently new disease, agranulocytic angina, that there arose a new conception regarding the effects of drugs on the hematopoietic system. Kracke,[7] in 1931, was the first to call attention to the fact that drugs might be responsible for the production of agranulocytosis, when he reported a case of acute fulminant agranulocytosis following the ingestion of large quantities of acetphenetidin. Numerous reports from various parts of the world rapidly appeared, confirming the drug etiology of one form of agranulocytosis, most of the earlier reports incriminating amidopyrine or drugs containing amidopyrine.

There are many unanswered questions relating to drug idiosyncrasies. With the thousands of doses given daily of the many drugs which are known to be capable of producing severe effects upon the hematopoietic system, why only an occasional individual is affected is still a matter of conjecture only. Fitzhugh[3] has advanced the theory of "conditioning factors" influencing the individual taking various drugs. As an example he refers to a possible hormonal conditioning factor to explain the cyclic occurrence of agranulocytopenia (presumably associated with the catamenia) which has been observed in a few instances in women.

CHART 1 (After Fitzhugh).

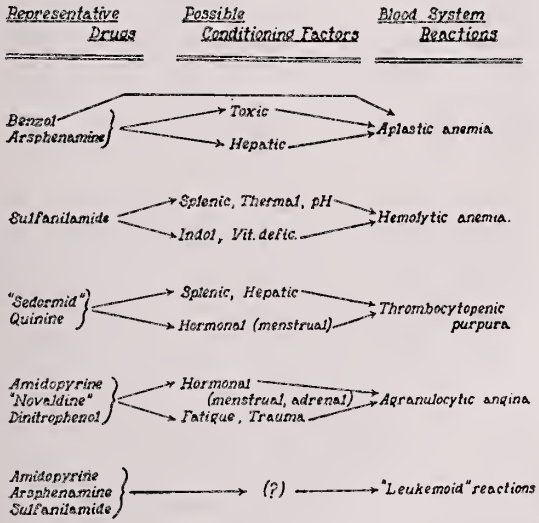

Chart 1 illustrates Fitzhugh's[3] conception as to the probable effect on the hematopoietic system of various drugs through certain assumed conditioning factors. No definite explanation can be given for the sudden agranulocytoclastic crises which seem to accompany the so-called agranulocytic angina. Fitzhugh[3] has suggested that,

"It may represent a shock-conditioned 'sticking' of leukocytes to the vascular endothelium, such as E. R. Clarke has demonstrated in his glass window preparations in the rabbit's ear. One or more peripheral episodes of this kind may be a necessary prelude to the arrest status of the bone marrow in the disease proper. It is even conceivable that for the duration of the disease, all granular and many non-granular leukocytes which emerge from the bone marrow, lymph nodes, and spleen, immediately become 'stuck' to capillary endothelium, where they are engulfed and destroyed."

Kracke,[8] on the other hand, has suggested that marrow depression probably antedates the leukocytic depression in the peripheral blood. Whatever the true explanation will be, we know that certain sensitizing reactions have taken place in individuals taking certain drugs, and that when these drugs are taken again, acute reactions may result.

TABLE 2.—*Preparations That Should Be Used With Caution Because They May Depress the Leukocytes.*

PREPARATIONS CONTAINING AMINOPYRINE	
Allonal	Dymen
Alphebin	Dysco
Amarbital	Eu Med
Amidol	Gardan
Amido-Neonal	Gynalgos
Amidonine	Hexin
Amidophen	Ipral-Amidopyrine
Amidopyrine (aminopyrine)	Kalms
Amidos	Lumodrin
Amidotal compound	Midol
Amifeine	Mylin
Aminol	Neonal compound
Am-Phen-Al	Neurodyne
Ampydin	Nod
Amytal compound	Optalidon
Analgia	Peralga
Antabs	Phenamidal
Baramid	Phen-Amidol
Barb-Amid	Phenopyrine
Benzedo compound	Pyramidon
Cibalgine	Pyraminal
Cinchopyrine	Seequit
Compral	Yeast-Vite
Cronal	
DRUGS KNOWN TO PRODUCE DEPRESSION OF THE MARROW	
Dinitrophenol	Antipyrine
Arsphenamine	Sulfanilamide
Novaldin	Sedormid (thrombocytopenia)

Table 2 shows a few preparations which have been known to cause a leukopenia, and so should be used with caution.[9] Most of them contain amidopyrine, which is believed to be the offending drug. The list is by no means complete, but it serves to remind us of the indiscriminate use being made of preparations that are potentially dangerous. It is to be understood that sulfapyridine and the newer compounds of sulfanilamide are included under the heading of sulfanilamide.

Table 3 shows those drugs which have been reported to have caused agranulocytosis.[9] This list is also not complete. Berghausen[1] in *The Journal of the American Medical Association* of April 20, 1940, reports a fatal case of leukopenia following the internal administration of causalin, which has been reported to contain about 1.82 grains of amidopyrine to every 7.5 grains capsule or tablet of the drug. Very little doubt exists at the present time that amidopyrine is probably the most common cause of agranulocytosis. If further proof of this belief were needed, Chart 2, taken from Plum's[10] Monograph on Experimental Investigations on Agranulocytosis, should serve as convincing evidence. Here we note the almost complete disappearance of agranulocytosis from Denmark after the importation of amidopyrine was prohibited in 1934.

TABLE 3.—*Drugs Reported to Have Caused Agranulocytosis.**

	No. of Cases
Aminopyrine	Over 300
Dinitrophenol	7
Arsphenamine†	20
Antipyrine	2
Derivative of aminopyrine (novaldin)	2
Acetanilid?	2
Acetophenetidin (phenacetin)?	3
Cinchophen (atophan)?	1
Antimony compound (neostibosan)?	8
Sulfanilamide	11
Quinine?	4
Gold salts?‡	19 (Plum)

*The drugs known to be capable of producing the disease are not followed by a question mark; for the others, followed by a question mark, the evidence is not adequate.
†Hematologic depression limited to granulocytes only.
‡Hematologic depression not limited to granulocytes.

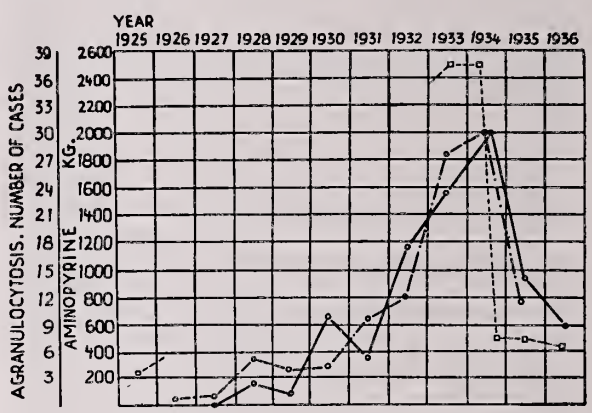

CHART 2.—Showing practically complete disappearance of agranulocytosis from Denmark after the importation of aminopyrine was prohibited (from Plum[10]). The solid line indicates the number of cases of agranulocytosis, the dots and dashes the sale of aminopyrine from importing firms and the broken line the estimated total consumption of aminopyrine.

TABLE 4.—*Drugs Which May Cause Acquired Hematologic Sensitivity (after Fitzhugh).*

1. Acetanilid	II	11. Gold salts	I III IV
2. Aminopyrine	II III IV V	12. "Neostibosan"	IV
3. Antipyrine	II	13. "Nirvanol"	IV
4. Arsphenamine	I II III IV V	14. "Novaldine"	IV
5. Benzene	I II III IV V	15. Phenacetin	IV
6. Bismuth	III IV	16. "Plasmochin"	IV
7. "Causalin"	IV	17. Quinine	II III IV V
8. Cinchophen	IV	18. "Sedormid"	III
9. Dinitrophenol	IV	19. Sulfanilamide	I II III IV V
10. Ergot	III		

Hematologic Disorders Sometimes Caused by Drug Sensitivity (Arabic number refers to drugs; Roman numerals, to diseases)
I. Aplastic anemia: 4, 5, 11, 19.
II. Hemolytic anemia: 1, 2, 3, 4, 5, 17, 19.
III. Thrombocytopenic purpura: 2, 4, 5, 6, 10, 11, 17, 18, 19.
IV. Agranulocytic angina: 2, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 19.
V. Leukemoid reactions: 2, 4, 5, 17, 19.

Table 4, taken from Fitzhugh,[3] groups those drugs which may cause acquired hema-

tologic sensitivity. Particular attention is directed to several of the drugs listed which are capable of producing severe effects upon all three of the blood elements, the thrombocyte, erythrocyte, and the leukocyte. Emphasis should be placed upon the sulfanilamide group as an outstanding example of drugs capable of causing these multiple effects. Tables 5 and 6 while repeating some of the

TABLE 5.—*Drugs That May Produce Hemolysis.*

Lead	Dinitrobenzene
Phenylhdrazine	Toluylene Diamine and allied drugs
Benzedrine	
Sulfanilamide	Phosphorus
Other Sulfonamide derivatives	Saponin
Potassium Chlorate	Ricin
Novarsenobillon	Snake Venom
Arseniuretted Hydrogen	

TABLE 6.—*Drugs That May Produce Platelet Destruction.*

Benzol	Belladonna
Arsenic	Quinnie
Bismuth	Calcium
Snake Venom	Novaldine
Copaiba	Sedormid

drugs in table 4, are shown, since they include several substances producing hematologic changes not shown on the list given by Fitzhugh.[3] The extremely common, and in many instances unnecessary, use of the potent compounds of sulfanilamide has resulted in numerous instances of their toxic effects being reported. Hardly a medical periodical is published today that does not contain such reports. It is to be remembered that some of the same drugs that cause a depression of the hematopoietic system may at times cause a marked stimulation of leukocytes. This has been noted after the use of arsphenamine, amidopyrine, and sulfanilamide. Kracke[8] has called attention to the possible confusion that this reaction with sulfanilamide may cause, for example, in a case of puerperal sepsis being treated with sulfanilamide, and a sudden rise of the leukocytes occurring. The question arises immediately: Was the reaction due to the drug? If true, it should of course, be withdrawn; or was the leukocytosis evidence of an extension of the infection?—in which case it would be wise to push the drug. No definite answer can be given to this question, but it should be kept in mind with every case treated with drugs capable of producing sensitized reactions.

Fitzhugh[3] has also noted a leukemoid reaction, involving the monocytes, which marked the recovery phase of an amidopyrine-induced agranulocytosis. A not commonly appreciated fact is that the depressing effects of the sulfanilamides on the hematopoietic system may not appear until some time after therapy has been discontinued.[13] These delayed reactions are either the result of retention of the drug in the tissues, or due to faulty elimination through the kidneys. Just how long such retention may last, is not a settled question. A case* which recently was observed, illustrates this forcibly. Because of a septic temperature sulfanilamide, 90 grains daily, was given for fifteen days. Splenomegaly was present, and the kidney function was perfect. Renal function tests including an intravenous pyelogram were normal. Before injecting the diodrast for the intravenous pyelogram, it was thought best to wait until all the sulfanilamide had been excreted from the blood. On the day that the administration of the drug was stopped, the blood sulfanilamide level was 7.4 mg. Twenty-four hours later it was 3.1 mg.; forty-eight hours 1.9 mg.; at seventy-two hours a trace was reported, and not until ninety-six hours after stopping the drug was the blood found to be entirely free of sulfanilamide.†

The occurrence of cyanosis in a patient receiving sulfanilamide or sulfapyridine is at times a distressing and alarming symptom, both to the patient and his family. The cyanosis may be due to the formation of sulphemoglobinemia or methemoglobinemia. Withdrawal of the drug and the use of transfusions are at present the only method of treatment used for sulphemoglobinemia. The continued inhalation of oxygen, however, would appear to be of value.

With methemoglobinemia, the use of methylene blue both orally and intravenously, has controlled the condition. Wendel[14] suggests the use of 2 mg. of the dye per kilogram of body weight intravenously, or from 0.5 to 1 Gm. daily by mouth. No bad effects from the dye have been noted, though occasionally the oral administration of methylene blue may be followed by vomiting and diarrhea, headache, and tinnitus. Campbell and Morgan[2] have suggested the routine use of methylene blue in conditions calling for prolonged administration of sulfapyridine as a useful measure in preventing cyanosis. No impairment of the therapeutic effectiveness of sulfanilamide has been noted when given simultaneously with methylene blue.

Frequent blood counts are of course the method used to determine the onset of untoward symptoms from the drugs employed. While sulfanilamide or sulfapyridine are being given, counts should be made not less often than every third day, and then should be continued for several days after the cessation of the drug treatment, to guard against the delayed reactions referred to above.

*Thanks are due Dr. F. D. Mohle, Houston, Texas, with whom this case was seen, for permission to report these findings.

†Brown, Thornton and Wilson, in the J. A. M. A. 114:1611 (April 27) 1940, report that sulfapyridine may remain in the liver in small quantities as long as forty days after chemotherapy has been terminated.

As in practically every other condition, prophylaxis or prevention is much to be desired over cure. Prevention of the hematologic reactions may be difficult to attain, owing to the peculiar idiosyncratic effects that these drugs may manifest. Because severe and dangerous reactions may occur with sulfanilamide; this will certainly not cause it to be discontinued in use—any more than we have failed to use arsphenamine because it may occasionally produce fatal reactions, such as hemorrhagic encephalitis. The results obtained justify the use of the sulfanilamides beyond all question of a doubt. Careful watching of the patient while the drug is being given, with frequently repeated blood examinations, will do much to lessen the occurrence of severe reactions. Very little excuse, however, can be found for the continued use of many of the drugs which have been mentioned.

In this group we place most of the compounds containing amidopyrine and dinitrophenol. No drug should be prescribed unless the physician knows what it contains, and of course the reactions both physiological and toxic. Too frequently, proprietary remedies, the active principle of which is amidopyrine, are prescribed in ignorance by the physician. Combinations of drugs known to have idiosyncratic potentialities should not be prescribed.

After the occurrence of one of the hematologic reactions, the first step in treatment is of course to stop the drug. In hemolytic cases, transfusions should be frequently given; liver extract, thiamin chloride, ascorbic acid, and nicotinic acid may also be given parenterally and internally. In some cases of thrombocytopenic purpura, splenectomy has resulted in cure. If there is found a decrease in prothrombin, bile salts and vitamin K should be given. In the treatment of agranulocytosis, many substances have been advised for use. None have proven effective in all cases, but in dealing with such a serious and critical condition, every treatment which has been reported to have produced favorable results should be tried. Fetal spleen was tried by Greer,[4] with varying success. Recently, Sweeney and Allday[12] reported a recovery after the use of daily blood transfusions. Pentnucleotide injections and yellow bone marrow extract by mouth, have been reported to be of value in the treatment of agranulocytosis, in addition to all the other substances which have been mentioned. Following immediately the marked leukopenia and hemolysis occurring with the use of certain drugs, infections from so-called "opportunist bacteria" may occur. When these infections can be proven to be due to a single predominating strain, as for example in pneumonia, the use of the specific agent is justified. Fitzhugh[3] reports the successful termination of a secondary hemolytic streptococcus septicemia with sulfanilamide therapy in a case of amidopyrine-induced agranulocytic angina.

In the above brief presentation, the hematopoietic system has been briefly outlined with the changes that occur in disorders of the blood. The theories advanced for drug reactions have been touched upon, and charts and tables have been used to illustrate the various changes produced on the hematopoietic system by different drugs, with particular reference to the sulfanilamides. Treatment has been briefly outlined and emphasis has been placed upon the necessity of the physician knowing what he is prescribing, and what reactions may be expected. Eternal vigilance is the price of safety.

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Medical Arts Building.

ABSTRACT OF DISCUSSION

Dr. Roy R. Kracke, Atlanta, Ga.: During the past four years the number of cases of agranulocytosis has apparently decreased with exception of the last year because of the use of sulfanilamide and other related drugs.

As I pointed out in my paper this morning, a decrease of the white cells to the point of agranulocytosis may be expected once in two or three hundred cases treated with sulfapyridine and sulfanilamide, and this complication does not develop until the patient has been treated for some time. In this respect the action seems to differ from aminopyridine from which agranulocytosis may develop after one or two doses.

The reason that the disease has decreased is apparently because physicians do not use aminopyridine as much as they did and also there has been a general educational program among the laity on the dangers of these drugs.

The mechanism of action of drugs on hematopoietic tissue still remains unknown in spite of considerable research on this question. Perhaps we will have to be content to call it "allergy," although this means that the person is a little different from everyone else in some unknown way.

The evidence is hardly adequate to incriminate some of the drugs that have been mentioned by Dr. Levy. The only drugs we can really condemn include amidopyrine. It is interesting that in the past five years many of the proprietary drug manufacturers have removed amidopyrine from their preparations, this being done for two reasons: first, because of the criticism of amidopyrine as an analgesic agent; and secondly, the new food and drug act, which requires them to place the formula on the package.

Depression of the leukocytes is not the only action of sulfanilamide on the white cells. This drug may also stimulate marrow output so that a leukocytosis of marked degree may be observed.

Recent work of interest in connection with the leukocytes is that of Nettleship. His last article is in a recent issue of the *American Journal of Clinical Pathology* and indicates the presence of a leukocyte stimulating factor which can be obtained from bone marrow. If that factor ever is demonstrated and is available, then we may have something that will be a worth while agent in the treatment of this disease.

In general, the treatment of agranulocytosis is unsatisfactory. I agree with the essayist that there is no specific agent that seems to be of considerable value in this disease. After the granulocytes completely disappear and the leukocyte count has reached a low level, and perhaps infection has supervened, I do not believe it makes much difference what you give that patient in an effort to stimulate increased marrow activity. It is expecting too much of a remedy to stimulate leukopoiesis under such conditions. Patients usually receive transfusions, liver extract, nucleotides, bone marrow preparations, and so forth, but there is inadequate evidence to indicate that any one of those contributes markedly to the recovery of the patient. Yet, as Dr. Levy says, when we are confronted with a case, we usually give them everything in the book, because we do not like to withhold anything that anybody at any time has said might be of some service. Perhaps that is the reason that we are unable to make any more definite statement about treatment since none of us has sufficient courage to treat a case of agranulocytosis with only one agent to the exclusion of all others.

Dr. F. J. Heck, Rochester, Minn.: I think we all owe Dr. Kracke a great debt for calling our attention to drug sensitivity in these cases. From a practical clinical standpoint it becomes extremely important to devise some way to follow the blood changes in cases being treated with sulfanilamide, and I must admit that I have not been able to hit upon a scheme which I think is practical, as far as the man in general practice is concerned.

These patients should be followed very regularly with blood counts but it is not being done in the practice of a great many physicians. I believe it is dangerous to treat without leukocyte counts but we are not going to be able to persuade many physicians to do anything about it until after they get into trouble and then it is usually too late.

I agree entirely with Dr. Kracke in regard to the treatment of granulocytopenia. We have used yellow bone marrow a great deal but it is difficult to evaluate the benefit which may have resulted. No one has had the courage to take a group of cases and see if they would recover if they were untreated.

We must not overlook the possibility in using sulfanilamide of whether or not an irreversible reaction may be produced in those cases in which a leukocytosis results. There has been a suggestion that occasional cases of leukemia have resulted following the administration of sulfanilamide, but the question always arises whether it was a coincidence or actually the result of stimulation from the drug.

BIOCHEMICAL ASPECTS OF HEMATOLOGY*

M. BODANSKY, M. D.
GALVESTON, TEXAS

Diagnosis of blood diseases depends largely on clinical and morphological study. In fact, there are only two chemical analytical procedures, the determination of hemoglobin and analysis of gastric contents, which are commonly employed in the diagnosis of anemia. To be sure, in the development of our present knowledge of anemia and of certain hemorrhagic diseases, biochemical theory and technique have been utilized, but on the whole the possibilities of such an approach to problems in hematology have not been too actively pursued.

Let us consider, for example, the composition of the erythrocyte. It contains normally about 64 to 65 per cent water and 31 to 33 per cent hemoglobin. The remaining constituents comprise, therefore, less than 5 per cent; yet it is these constituents, the proteins, lipoids, minerals, and so forth, of the stroma and cell membrane which determine the physical and chemical properties of the red cell—its shape, permeability, resistance to various agents, and so on. We can be reasonably confident that in certain types of anemia and possibly in other diseases, the composition of the erythrocyte changes significantly. Thus, Erickson and associates[3] have shown that in erythroblastic anemia the total lipid content is approximately twice the normal, and the neutral fat fraction may increase more than 600 per cent. They have advanced the view that the abnormalities in the concentration and distribution of the lipids and minerals which occur in the erythrocyte are dependent on the type of anemia and are related in some way to the characteristic red blood cell typical of the anemia.

In 1925, the present writer[2] found that the corpuscle in anemia (experimental) differs from the normal in containing relatively large amounts of cholesterol ester. Recently Williams and associates[7] found this to be a characteristic also of pernicious anemia. These and other changes in corpuscular composition are indicative of fundamental deficiencies in corpuscular structure. In sickle cell anemia, the red cells show increases of total lipid and cholesterol, both free and combined. The cholesterol ester fraction is

*Read before the Section on Clinical Pathology, State Medical Association of Texas, Dallas, May 14, 1940.

not significantly changed in hypochromic anemia, though there is an increase in total lipids. On the other hand, in hemolytic icterus the total lipid content is diminished, chiefly at the expense of the phospho-lipid and free cholesterol fractions. To the extent that our knowledge of these and similar changes is augmented, to that extent also will we be better able to explain the physical peculiarities of the red cells in various blood diseases, such as congenital hemolytic and sickle-cell anemias, and to understand more fully the basic defects involved in the causation of these diseases.

Changes in blood volume in various diseases are today the subject of lively interest. It has been shown recently that pernicious anemia in relapse is characterized by a reduction of the total blood volume. As the red cell rises in response to liver therapy the mass of circulating red cells increases, the plasma volume diminishes and the total blood volume is restored to normal. A contrasting group of findings occur in polycythemia vera; the total blood volume and the volume of circulating red cells are increased, while the plasma volume is diminished. According to Haden,[4] these findings distinguish polycythemia vera from symptomatic forms of polycythemia due to interference with oxygenation of hemoglobin.

One of the major medical achievements of our time has been the discovery by Minot and Murphy of the value of liver extract in the treatment of pernicious anemia. How this discovery led to our present-day conception of the factors necessary for the maturation of the erythrocyte is well known and needs no further comment here. However, precise knowledge of the mechanisms involved is still lacking. The constitution of the extrinsic factor is unknown, though it seems to occur in a number of natural sources of the vitamin B complex. The intrinsic factor appears to possess the properties of a proteolytic enzyme. In the opinion of competent students of hematology, the isolation and identification of these factors are essential steps which must be taken before other features of the subject can be further clarified.

Deficiency of the intrinsic factor is but one of the evidences of the abnormal condition of the gastric mucosa in Addisonian anemia. All functional activities appear to be greatly depressed or abolished. Even histamine is capable of producing little or no effect on the volume of secretion, or on the concentration of acid, chloride, pepsin and rennin. A clear-cut demonstration of these abnormalities often depends on the analytical procedures used; those recommended by Helmer and Fouts[6] are very satisfactory for most clinical purposes.

Gastric anacidity which is a constant finding in Addisonian pernicious anemia is also frequently associated with hypochromic or so-called "idiopathic" hypochromic anemia, a condition occurring not uncommonly in middle-aged women. While the disease is probably caused by a variety of factors, deficient absorption of iron due to achlorhydria is of outstanding importance. The requirements, utilization, and metabolism of iron are currently under intensive investigation and we may anticipate for the future more adequate knowledge concerning the way in which iron is utilized to form hemoglobin.

The formation of hemoglobin presents a number of interesting problems. Heath and Taylor[5] have called attention to the fact that the response to specific therapy, iron in iron-deficiency anemia, liver extract in pernicious anemia, occurs even when the protein intake is inadequate. Under these circumstances hemoglobin and red cells are formed at the expense of tissue and plasma proteins. Depletion may become severe enough to produce hypoproteinemia and edema. That deficiency of animal protein may also be a cause of anemia is indicated from Bethell's studies[1] of macrocytic anemia of pregnancy.

Blood formation and destruction influence the metabolism of certain pigments, erythropoietic activity being accompanied by an increased excretion of coproporphyrin I, while increased blood destruction is reflected by an increased output of urobilinogen.

The hemorrhagic tendency associated with biliary obstruction, hemorrhage in the newborn and related disorders are at present the subject of considerable attention because of the dramatic therapeutic effects obtained by the administration of vitamin K. The hemorrhagic tendency in these disorders is due to a deficiency of prothrombin in the blood which may be corrected by the administration of vitamin K. How vitamin K causes increased synthesis of prothrombin is a biochemical problem which remains to be solved. Another problem concerns the precise evaluation and technical refinement of the methods for the determination of plasma prothrombin, though it must be conceded that the procedures introduced by Quick and by Smith and their associates have proven clinically useful.

Another hemorrhagic disease which has been assiduously studied is hemophilia. There is now substantial evidence that the disorder may be due to a deficiency in the euglobulin fraction of the plasma. Normal citrated plasma, after separation of prothrombin and fibrinogen, is active in reduc-

ing the coagulation time of hemophiliac blood *in vitro*. A prompt reduction in coagulation time also results in patients with hemophilia following the intravenous injection of such plasma.

The foregoing illustrations embrace some of the advances in the field of hematology which have been made, at least partly, through the application of biochemical principles and procedures. Though progress has been noteworthy in certain directions, it is quite apparent that there exist many gaps in our knowledge and that the field of hematology as a whole has been barely explored. Whether further intensification of effort in this field of endeavor would lead to practical results is something that only the future can decide.

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John Sealy Hospital.

ABSTRACT OF DISCUSSION

Dr. Roy R. Kracke, Atlanta, Ga.: I would like to say just one word in conclusion.

Dr. Bodansky's paper is important, because he emphasizes the necessity for biochemical research work in the field of hematology. I feel that progress in hematology is coming about only by the interest of such men as Dr. Bodansky and biochemists generally. Each time I have begun a research problem in hematology, I have encountered what we call a "biochemical wall," through which I am unable to penetrate, mainly because of lack of training. I have reached the point many times where I wish I could go back to school again and learn biochemistry all over, at least to the point where I could apply it to research problems. The problem of leukemia is one of the greatest challenges to the biochemist.

I would like to say that I have enjoyed very much being permitted the opportunity to discuss all of these splendid papers in this section, and again to thank you for your courtesy in inviting me as the guest of your Section.

WHY SALT WATER WON'T QUENCH THIRST

In answer to an inquiry as to why human beings cannot exist on salt water used to quench their thirst, *Hygeia, The Health Magazine* explains: "The body fluids contain about 1 per cent salt. Sea water contains about three times as much salt of various kinds. When a fluid with a high salt content is taken into the mouth, it extracts water from the tissues and the blood stream. The dryness in the linings of the mouth and throat and the sensation of thirst are therefore increased."

X-RAY TREATMENT OF EWING'S TUMOR*

R. H. CROCKETT, M. D.
SAN ANTONIO, TEXAS

It is now twenty years since Ewing described a certain type of tumor, most frequently found in bone. Ewing called the tumor endothelioma of bone, but it is now commonly known as Ewing's tumor, because of his careful description. In 1922, Ewing described three types of endothelioma of bone, solitary bulky cystic, multiple endothelioma of bone, and solitary diffuse endothelioma. Ewing's third division (solitary diffuse endothelioma) represents the tumor that is now known as Ewing's tumor. I quote his first paragraph in describing solitary diffuse endothelioma:

"This relatively frequent and quite specific disease is usually unrecognized and passes under the clinical diagnosis of round-cell sarcoma of bone. It may be distinguished from osteogenic sarcoma by its somewhat peculiar clinical history, the location in a considerable portion of the shaft rather than at the end of the bone, by a characteristic radiographic picture, and by the marked susceptibility of the tumor tissues to radium and x-ray."

There has been some argument about the cellular origin of Ewing's tumor, as to whether the parent cells are undifferentiated osteoblasts, undifferentiated mesenchyme, or cells lining lymph spaces, or blood spaces, of the haversian canals. A few have contended that these tumors are all metastatic. Ewing himself says of solitary bulky cystic or telangiectatic angio endothelioma, that "a somewhat similar structure may be produced by metastatic carcinoma of the kidney or adrenal." However, the possibility of Ewing's tumor being metastatic seems to have been ruled out, because some Ewing's tumors of extremities have been cured for several years by amputation, or x-ray treatment, and furthermore, no tumor has been found in the patients from which the Ewing's tumor might have metastasized. The marked effect of x-ray and radium on Ewing's tumor would indicate that they come from lymph tissue, because all tissue of lymph cell origin is considerably more sensitive to radiation than any other tissue, with the possible exception of certain reproductive cells. Also, in tissue culture, the characteristics are lymphoid. Histologically, the tumor is composed of small round cells with dense nuclei and scant cytoplasm, simulating lymphosarcoma.

The apparent failure to correctly diagnose Ewing's tumor until it is too late to hope for a cure, when early diagnosis offers a larger percentage of cures, is the reason for this

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paper. With exceptions, Ewing's tumor occurs in younger, as contrasted with carcinoma which occurs in older persons. Boyd says Ewing's tumor usually occurs between the ages of 5 to 15, and is rare after 30; and composes 10 to 15 per cent of all bone tumors, when giant cell sarcoma is included in the total. Desjardins, Meyerding and Leddy, state that Ewing's tumor is much more common than most physicians realize, and that as these tumors are better recognized, they may prove to be more common than osteogenic sarcoma or osteochondroma.

Ewing's tumor usually begins slowly, in a long bone. There is mild, intermittent pain. A low grade of irregular fever is often present. Loss of weight may occur early but usually occurs late. The blood often shows moderately decreased red cells and slightly increased white cells. Weeks or several months may pass before swelling of soft tissue occurs. Tumefaction may show recurrent decrease and increase, accompanied by decrease and increase of pain. This variation is likely due to intratumoral hemorrhage, followed by absorption.

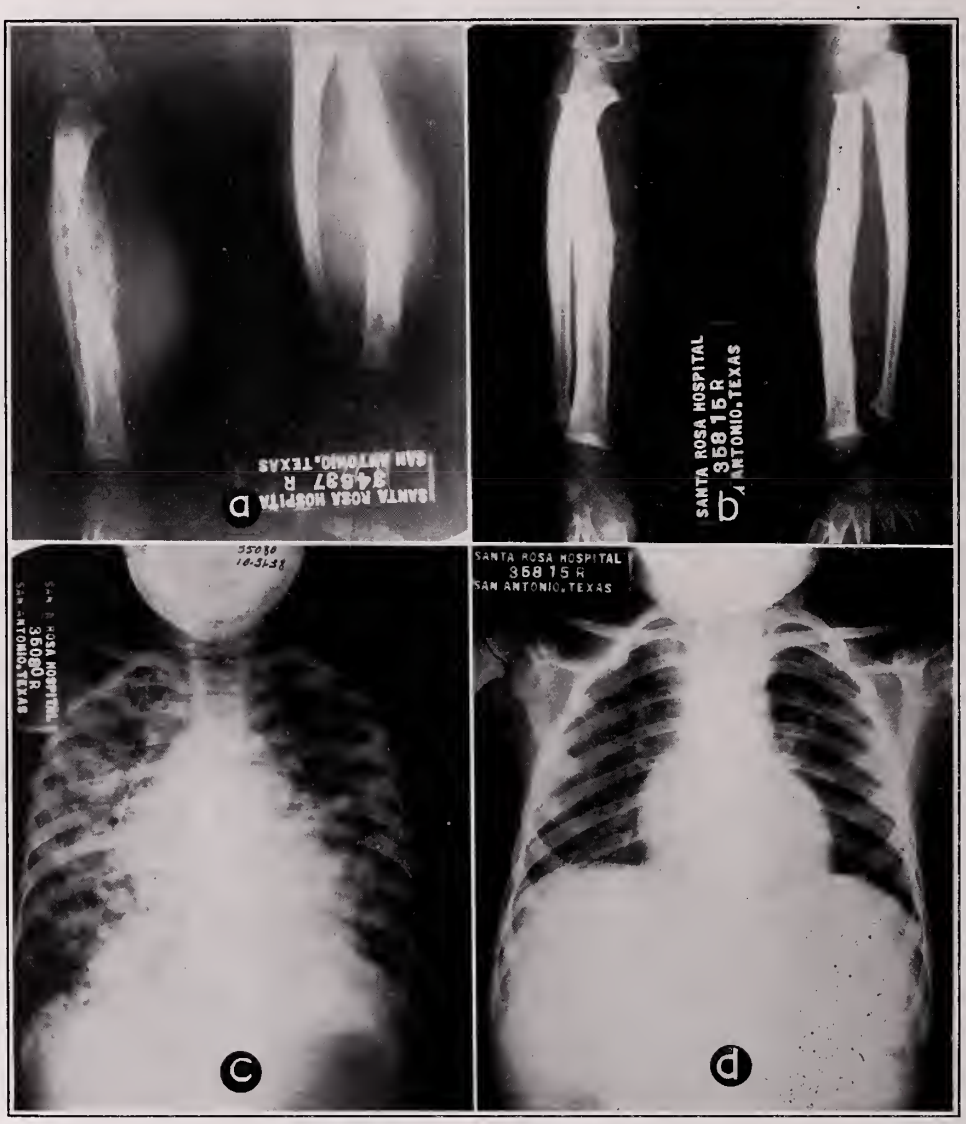

FIG. 1. (Case 1) *a*. Roentgenogram showing soft tumor mass and affected bone of right radius before x-ray treatment.
b. Roentgenogram showing healed soft tumor mass and healed bone lesion of the right radius a little over four months after x-ray therapy.
c. (Case 1). Roentgenogram showing metastases to the lung before x-ray treatment.
d. Roentgenogram showing healing of chest metastases a little over three months after x-ray therapy.

Due to the mildly recurrent pain, the patient often does not consult his doctor very early. There is often a history of trauma, but it is perhaps not etiological. When the patient is first seen, the general practitioner very frequently makes a diagnosis of inflam-

matory disease of bone, and even the orthopedic surgeon, if he is not familiar with this type of tumor, may make the same error.

The tumor is softer than bone, which often causes the doctor to make an incision, which shows soft necrotic material easily mistaken for pus. The doctor is pleased at his correct diagnosis, and does not even dream of a biopsy. However, to his surprise, the tume-

FIG. 2. Roentgenograms in a case of Ewing's tumor in a white female, age 7. No biopsy was done. (Left) Bone tumor of the right humerus before treatment; (right) bone healing after x-ray therapy. Metastases to the chest later cleared up after x-ray therapy, but still later there was recurrence in the chest, which was fatal. (Reprinted by permission from Geschickter and Copeland: Tumors of Bone, published by the *American Journal of Cancer*).

faction, instead of decreasing as a pus pocket should, continues to increase in size and extent. Then a roentgenogram is made, which, if the disease is not too far advanced, shows a characteristic slight expansion of the shaft, with a periosteal reaction looking somewhat like onion peel.

Ewing says that the history and roentgenogram, combined with the rapid regression following therapeutic x-ray radiation is sufficient for a positive diagnosis, without biopsy. A persistent diagnosis by his colleagues of some form of periostitis, forced Ewing to do biopsies in some cases to prove that he was right. The pathologist who is familiar with this type of tumor readily diagnoses removed sections, but one less familiar may call the tissue round cell sarcoma, or be somewhat confused in his interpretation.

Potozky and Freid have reported four cases of Ewing's tumor apparently arising in soft tissue, which is quite possible if the origin is lymphatic. All four were proven by biopsy, and had lung metastases. Necropsies were done in three cases and one has either been arrested for some time, or has been cured by x-ray therapy.

Desjardins, Meyerding and Leddy, in 1937, report fifty-two cases from the Mayo Clinic. They consider four distinctive features: "(1) a tendency to absorb or destroy bone, and never to produce bone, (2) slow metastasis, (3) tendency to invade soft parts, and (4) marked susceptibility to roentgen ray and radium." They feel that a combined clinical and roentgenographic diagnosis is often uncertain, and that since the fate of an extremity is often at stake, a therapeutic radiation test should be included. When there is a combination of a microscopic and a therapeutic radiation test if there is a conflict between these, the radiation test should have preference, because it has proven to be the more accurate (in this special tumor). When both biopsy and special sensitiveness to ra-

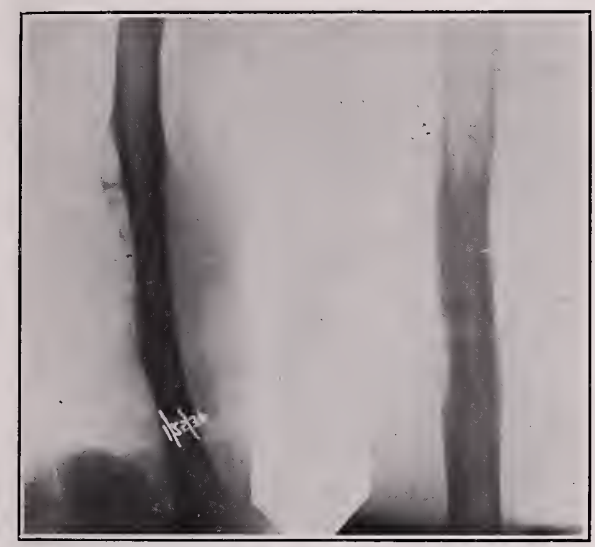

FIG. 3. (Roentgenograms and case history, from Johns Hopkins Hospital, by courtesy of Dr. Geschickter.) The patient was a white male, aged 4. The roentgenogram on the left shows Ewing's sarcoma of mid-shaft of the right femur before radiation. The roentgenogram on the right shows healing following x-ray treatment. The patient later had recurrence at the lower end of the same femur, followed by pathological fracture. The patient received further x-ray treatment over the pathological fracture. A walking caliper was fitted. Twelve hundred roentgens of x-ray therapy over the pathological fracture has caused fibrous union with low grade osteomyelitis, with some swelling of the leg. Ewing's tumor was diagnosed May 28, 1934. The patient is apparently free of all malignancy April, 1940.

diation are positive, the evidence of Ewing's tumor is undisputable.

A therapeutic x-ray exposure produces rapid regression of the tumor mass, relief of pain, and repair of affected bone. A small percentage of Ewing's tumors have been cured by radiation alone, and a larger percentage could be cured, if cases were seen before metastasis occurs. No local recurrences have occurred where adequate radiation was given. Metastases are as radiation sensitive

as the primary tumor. However, most patients die from continued metastases.

Of the fifty-two cases reported, twenty-four received only x-ray therapy. When this report was made, six out of the twenty-four patients treated by x-ray only, were apparently well, from three to twelve years. This shows an apparent cure of 25 per cent, which is very high for this type of cancer. Biopsy was not done in ten cases of this group, but all the other tests, including the clinical diagnosis, were positive. Among some, this would cause a doubt of correct diagnosis, but had a biopsy been done, the formative stage of pathological opinion in this special tumor would have been less conclusive than the combination of all the other positive tests, clinical, roentgenographic, and therapeutic radiation.

Boyd, Geschickter, and Copeland maintain that reformation of bone does occur early, followed by late bone destruction. From gross morbid specimens, Geschickter and Copeland believe they can show that bone destruction occurs only late, due to choking of the blood supply by the tumor. They also claim late pathologic fracture and even then not frequent. Ewing speaks of early pathological fracture and says bone metastasis to the skull is frequent after a year's duration. He finds it difficult to determine whether distant bone occurrence is metastasis or new evidence of primary disease.

Ewing's tumor usually metastasizes rather late to other bones, while multiple myeloma shows early, rapid, and wide bone involvement. Ewing's tumor usually metastasizes to the lungs, but later than osteogenic sarcoma, which also does not show bone metastases nearly as often as does Ewing's tumor. Also, Ewing's tumor involves adjacent lymph nodes, while osteogenic sarcoma does not. Boyd says Ewing's tumor metastasizes to lungs, lymph nodes, other organs and other bones. He says osteogenic sarcoma seldom metastasizes to other bones.

Geschickter and Copeland in their 1936 book on Tumors of Bone, review 125 cases of Ewing's sarcoma (Ewing's tumor), seen at the Johns Hopkins Hospital. They found no myelocytes in increased white counts (one of which was 20,000) and no Bence Jones bodies in the urine. Most of the tumors were in long bones, and always in the shaft, except in two cases, in which apparently the ends of bones were invaded from a primary shaft focus.

All postmortems showed metastases; the most frequent sites were lung, skull, and lymph nodes. The most striking feature was dissemination to the other bones, skull, spine, ribs, scapula or clavicle, although secondary foci were seen in the long bones. Single bone involvement in young individuals, with later bone metastases, shows a marked difference between Ewing's tumor and other bone tumors.

They feel that exploratory operation and biopsy does not make the prognosis worse, where x-ray treatment or radical operation is later carried out. Apparently symptoms do not always precede the fatal stages of the disease, by a sufficient margin, for purposes of curative therapeutics. They advise that combined radiation and surgery give the best results. A few cures may follow radiation alone, but if after six weeks, definite results are not obtained, long bones should be amputated. Radiation provides a good therapeutic test, and is the best available palliative therapy.

I wish to report a typical case, all of the tests being positive, except no biopsy was taken. I submitted the history and the lantern slides of the roentgenograms to Drs. Desjardins and Geschickter. They both confirmed my diagnosis of Ewing's tumor, but of course, would have preferred a biopsy for absolute confirmation.

CASE REPORT

A Mexican male, aged 5, came to the Santa Rosa Hospital Crippled Children's Ward, presenting a tumor mass of the right radius. The temperature averaged 100° F. The blood count showed 4,700,000 red cells, and 17,500 white cells, polys 85, small lymphocytes 11, large lymphocytes 4, and stabs 15. The Kahn and Kolmer tests were negative. The roentgenogram was interpreted as chronic osteomyelitis showing some new bone present. Dr. Ed Cayo did an exploratory operation, which showed necrotic material and excessive callus formation. Dr. Cayo did not take a biopsy because biopsies of chronic osteomyelitis are not usually taken. However, just as had been the result in many similar cases, drainage did not reduce the tumor, and Dr. Cayo advised x-ray therapy.

As I did not have a definite idea as to the nature of the tumor, I gave a guarded treatment. On September 28, 1938, the right radius received at one exposure, with 6-inch square port, 804 *r* units, using 200 kilovolts, with ½ mm. copper and 1 mm. aluminum filter. In a month, the tumor mass was gone.

On November 3, 1938, I was called to see the child again and found him almost dead. At first, miliary tuberculosis of the lungs was considered, but as the child had a tumor of the radius, malignant lung metastasis was the logical diagnosis. On November 3, 1938, the patient was given 670 *r* over the chest anteriorly, with a 6-inch square port, using 200 kilovolts, ½ mm. copper and 1 mm. aluminum filter. The next day, 536 *r* was given posteriorly. The child was so sick that his parents took him home to die.

On February 16, 1939, a little more than three months later, the patient came back to the hospital, clinically well. Roentgenograms showed the radius and lungs to be completely healed. The patient's parents were told to bring the child back for observation, but they never returned, and letters were never answered. Finally a letter to the postmaster determined that the child died about November 15, 1939, about thirteen and a half months after first entering the hospital. The father stated that sores ap-

peared on the body and head before the child died, which were likely metastases to other bones of the body and skull.

Dr. Geschickter has sent me lantern slides of two Ewing tumor cases from the Johns Hopkins Hospital. Both were diagnosed without biopsy, and treated with x-ray. One patient was well two years and then died. The other patient has remained well six years.

SUMMARY

1. Ewing's tumor is quite separate from other tumors, in that it usually arises in a single long bone of a young person, and is unusually sensitive to x-ray and radium treatment.

2. Due to an insidious onset, the disease is often mistaken for some form of inflammatory bone disease. This very frequent misdiagnosis causes the correct treatment to be so delayed that the patient's chance for recovery has been lost. Ewing's tumor is quite common, amounting to approximately 15 per cent of all bone tumors.

3. When in a long bone, early x-ray therapy followed by amputation offers a moderate percentage of cure. However, if an early diagnosis is made, adequate x-ray therapy alone may save both the limb and the life of the patient.

4. A typical case in a 5-year-old male is reported, and roentgenograms of two other cases are presented.

Nix Professional Building.

ABSTRACT OF DISCUSSION

Dr. Furman H. Tyner, Port Arthur: In a personal communication the essayist suggested that methods of therapy might be brought out in the discussion, but first I should like to mention a few points relative to the condition itself.

As he has mentioned early diagnosis by x-ray alone is very difficult and oftentimes impossible. In the very early cases when bone changes are limited to condensation with interspersed rarefaction in the diaphysis with little or no periosteal reaction the condition can in no way be differentiated from osteomyelitis for which it is often if not usually mistaken. Later the periosteal proliferation furnishes the key to a correct diagnosis of bone malignancy, but not necessarily to the correct classification of Ewing's tumor as the pattern of "onion skin layers" is not always present. New bone formation may be laid down in spicules perpendicular to the shaft presenting the picture of osteogenic sarcoma; particularly is that true where there has been surgical intervention. I see no reason for the prevalent opinion that biopsy is not necessary. It will often furnish the correct diagnosis well in advance of diagnostic x-ray findings. It is well to remember that the diaphysis is the site of predilection in long bones and that the tibia and femur are most frequently affected. In the Bone Sarcoma Registry of 184 cases, thirty-nine occurred in the tibia and thirty-eight in the femur, a total of seventy-seven or approximately 42 per cent. Occurrence is twice as frequent in males as in females.

In regard to metastases, cases have been reported in which metastases appeared six, eight and even nine years after the local lesion had been removed or made to disappear.

Treatment consists of radiation, surgery and, depending on the individual belief, Coley's toxins. As to radiation, radium is losing favor with roentgen radiation gaining favor. Massive radium packs are not available in most localities for this type of treatment.

When possible a combination of radiation and surgery should offer the best results.

In the extremities we give 3000 *r* units divided into four portals. This is administered fractionally, giving 200 *r* per day, using 200 kilovolts filtered through either ½ mm. or ¾ mm. copper, plus 1 mm. aluminum. One month following the last treatment this course is repeated, giving a total of 6000 *r* units. In ten days or two weeks following the final treatment of the second course the extremity is amputated as high as possible to leave a stump serviceable for an artificial limb.

In other areas accessible for radical surgery 3000 *r*, using the same factors, is delivered fractionally in the same manner, using as many portals as possible to divide the skin field. This is followed one month later by radical removal.

In areas inaccessible to surgery, 3000 *r* is delivered in the same manner and this course is again administered two months following the final treatment of the first course.

Metastases are treated in the same manner unless they disappear following the first course.

I have never used Coley's toxins in the treatment of this tumor; however, they have been used extensively in conjunction with other treatment. The toxins are made from killed cultures of B. streptococcus and B. prodigiosus. Opinion of the value of toxins is at a wide variance, but in view of the favorable reports of thoroughly competent workers this type of therapy demands consideration in methods of treatment of this condition.

Dr. J. J. Faust, Tyler: This paper has been well prepared and in a manner that should be interesting to all who may read it. I agree with the writer that the lymphoid characteristics are predominant, and I feel that the origin is there rather than in the true bony structure. A therapeutic test would receive my preference to a biopsy because I feel that it is safer and fully as diagnostic since the biopsy may not be at the right place even if the pathologist is fully conversant with the histology and data concerning the case. Where an extremity is involved I believe after intensive x-ray therapy I would advise surgery to avoid possible metastasis which seems to be inevitable in at least 75 per cent or more of the cases.

In reviewing the literature Coley's serum was mentioned repeatedly and since it was effective in some cases I am wondering if the new drug, sulfanilamide, or some of its derivatives, might be of any assistance as Dr. Coley believes it has an infectious origin and says he has been able to transplant it to chicks and also that others have duplicated his work.

As for the x-ray therapy used it is quite striking to me that those using moderate voltages, in the neighborhood of 140 kilovolts, appear to get as good and even better results than with 200 kilovolts and higher. The tissue, when it responds, seems to be more sensitive to the longer wavelengths and have more absorption than for the shorter and more penetrating rays. Multiple portals of irradiation are helpful but excessive irradiation may hinder bone repair. Several series of moderate intensity are reported as more effective than very heavy irradiation and then a long wait as would be necessary for the skin and surrounding tissues to recuperate.

The case reported by Dr. Crockett is very interesting and a typical example if any one case can be so called.

Dr. Crockett (closing): Kaplan advises a total of

3000 *r* units given through several ports, and to repeat after several weeks, but gives no definite time, and to treat metastases as they appear. Desjardins advises treatment to tolerance, using four, six, eight, or more ports. The question of tolerance is hard to determine. Desjardins calls attention to the fact that heavy radiation of muscle and bone in children may arrest the growth of these structures, and even in adults may prevent normal recalcification. However, in such a desperate disease, if the patient's life can be saved by heavy radiation, disturbance of local growth should not be considered.

The treatment of each case must be individually and very carefully planned. The radius of a five-year-old child certainly could not stand as much treatment as the femur of a young adult. Desjardins advises 135 kilovolts in small extremities and 200 kilovolts in large extremities and body areas. I believe his use of 135 kilovolts in small extremities is correct.

The optimum time to re-treat areas is still undetermined. I believe an area should not be re-treated as long as there is no evidence of recurrence in repeated roentgenograms, and there is no recurrence of symptoms. While amputation following radiation is a good method of treatment it would seem very undesirable to lose a leg or arm if radiation is sufficient. Some patients who have received only x-ray treatment have remained well over five years.

ROENTGEN DIAGNOSIS OF CALCIFIED PELVIC TUMORS*

C. A. STEVENSON, M. D.
TEMPLE, TEXAS

Calcification in the human body may occur either as a physiologic or pathologic process. Physiologic calcification is best illustrated by the formation of bone and teeth, while pathologic calcification is the deposition of calcium salts in tissues which normally contain no calcium masses. Calcium salts may be deposited in practically any tissue or organ in the body. Usually this process is preceded by injury or death of the cells constituting the tissue, but in metastatic calcification the lime salts may be found in apparently normal tissues.

Metastatic calcification is but rarely noted on a roentgenogram while local calcification preceded by tissue injury is quite commonly seen. Prior to the advent of the roentgen ray, calcification was of interest mainly to pathologists. Calcified tuberculous lesions and calcifications in the arterial system were noted by early roentgenologists; but, with the improvement in the technical qualities of the roentgenogram, more interest was aroused in other calcifications, and now it is possible to gain much information from a roentgenogram showing opaque calcified areas. Of all parts of the body which may show calcification on the x-ray film, the female pelvis can present the most varied, and numerous opaque areas. The portion of the urogenital system located within the bony pelvis gives rise to most of these opaque areas, but the musculature, vascular system, and bony framework also contribute numerous opacities. Calcified areas in the female pelvis, as well as elsewhere in the body, are important for the reason that they may give the necessary clue to the identification of the underlying pathologic process. Pyelography, cystoscopy, and technically good x-ray films of the pelvis have added much to the accuracy of interpretation of opaque areas in the pelvic portion of the urinary system; but little has been written about calcification in the female generative tract.

The most accurate pathologic statistics indicate that about one of every five adult females have uterine fibroid tumors while ovarian tumors ranging from simple retention cysts to the more complicated benign and malignant tumors are exceedingly common in the average physician's gynecologic practice. Calcification as observed roentgenographically in the uterus and ovaries is not common. The roentgen diagnosis of calcified pelvic tumor, other than of the gravid uterus, was made in only sixty-three instances in 5,000 films made of the female pelvis at the Scott and White Clinic from 1937 to 1940. However, when these particular calcified areas are observed, the disease process may be recognized in most instances.

EARLY PREGNANCY

The most common calcified tumor in the female pelvis is the bony skeletal system of a fetus. As early as two and a half to three months after conception the bones of the fetus become opaque to the roentgen ray and are easily discerned on the roentgenogram. Technically good films depict the fetal bones clearly; but in case of certain errors in technique, such as movement of the patient, underexposure, and so forth, the fetal skeleton may assume the appearance of an irregular calcified mass. It is a simple matter for the roentgenologist to determine these errors and obtain a film of better diagnostic quality.

UTERINE FIBROMYOMAS

Only a small per cent of uterine fibroid tumors calcify, but when this calcification is visualized on the roentgenogram, it characteristically assumes a round or ovoid shape in the usual anteroposterior film. The most common finding is a collection of multiple, imperfectly round, opaque shadows of 1 to 3 mm. in diameter, closely grouped together and sometimes the entire group being enclosed by a thin solid ring of calcium. The location of this group of opaque shadows in the pelvis is not of great diagnostic significance for subserous fibroids are most prone

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*From the Department of Radiology, Scott and White Clinic, Temple, Texas.

to calcify, and these fibroids then are located away from the center of the pelvis. Roentgenograms showing good soft tissue detail may enable one to trace the outline of the uterus over the calcified masses. The density of the opaque areas as depicted on the x-ray film is practically never the complete whiteness as observed in tooth or bone images.

The roentgenologist can best interpret calcified pelvic tumors by having a thorough knowledge of the gross and microscopic pathologic changes in these tissues. Fibroid tumors of the uterus are spherical and sharply demarcated from the surrounding uterine tissue. Boyd states that the deposition of calcium in these tumors is preceded by fatty degeneration and that most of the calcified fibroids are observed after the menopause when the tumor cells lose their ability to multiply. Whether this lack of growth is due to hormonal change or decrease in blood supply is difficult to say, but the resulting necrosis is stippled through the tumor and at times about the periphery of the entire tumor. Calcium salts are laid down in these areas and hence the characteristic roentgen image is formed.

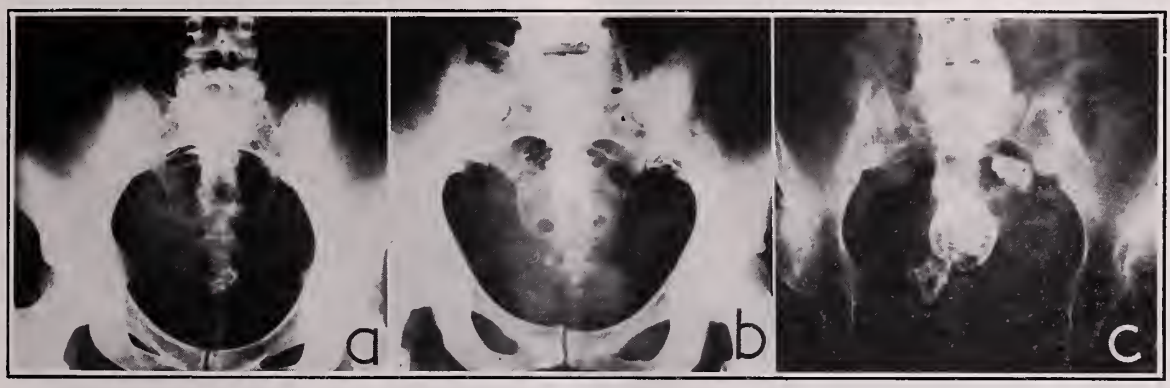

FIG. 1*a*.—A typical collection of opaque areas in a uterine fibroid tumor. *b* and *c* show variations from this common calcification.*

b. Large uterine fibroid showing sparse calcification of the usual size and shape with an incomplete surrounding ring of calcium.

c. Four calcified fibroids all within the soft tissue shadow of uterus. The small dense shadow may be seen on the original film to be made up of closely packed small opaque areas. Each of these fibroids shows a different type of calcification but none is similar to calcification in an ovarian dermoid tumor.

OVARIAN DERMOID TUMORS

In a series of fifty-two dermoid tumors of the ovary examined pathologically at the Scott and White Clinic during the past five years, twenty-six showed roentgen opaque areas in the form of teeth or bone. Five hundred other ovarian tumors and cysts were reviewed and only two instances of gross calcification were observed. One of these calcified tumors was a solid fibroma and the other a benign cystadenoma.

The roentgen characteristics of the calcified areas in ovarian dermoid cysts are distinctly different from those of uterine fibromyomas. Dermoid calcification is physiologic because the misplaced embryonic tissues perform their hereditary function and the calcium is not preceded by necrosis. When recognizable tooth structure is visible on the roentgenogram the diagnosis of dermoid tumor is easily made, but, when this feature is not apparent, other signs must be looked for. Bone formation is typically shown as a dense amorphous mass extremely irregular in outline and of any size and shape, located anywhere in the pelvis. There is no recognizable bone structure, and no similarity in size and shape exists in two different calcified dermoids as there is in two different calcified fibroids. The density of this physiologic calcification as portrayed on the roentgenogram is complete whiteness in the case of teeth and almost complete opacity in the case of bone. The bone, however, does not have the uniform density of tooth structure.

In certain instances additional aid in the diagnosis of ovarian dermoid tumors may be obtained from the roentgenogram. This is the appearance of a definite ringlike shadow of soft tissue about a darker, less radio-opaque tumor. The pathologic basis for this roentgen observation is that the dermoid is lined by squamous cell epithelium with its sebaceous glands and hair and is filled by a yellow fluid of high fat content. This fat accumulates from desquamation of the epithelium and from excretions of the sebaceous glands. The high fat content fluid is less radio-opaque than the surrounding tissues and will cast a dark shadow similar to that of a lipoma in the soft tissues of the extremities. In a series of ten cases recently seen at the Scott and White Clinic, three

*All illustrations except Figure 2*c* represent cases proven by pathologic examination.

showed this ring shadow. The ring shadow must be differentiated from an oval or round collection of gas in the rectum. The dermoid wall is comparatively thicker on the roentgenogram than the rectal lining around the gas, and the rectal wall is of uniform thickness while the dermoid wall may be irregular. Reëxamination after administration of a cathartic or pitressin will establish the diagnosis in doubtful cases.

OTHER OVARIAN TUMORS

As has been shown before, ovarian tumors other than dermoids rarely calcify. Of practically all types of ovarian tumors, the solid fibromas show gross evidence of necrosis in about 30 per cent. Two calcified fibromas have come under my observation. One shown in figure 2*c* was not pathologically proved but is seen on the roentgenogram to be in the usual position of the ovary some distance from the uterus. This solid mass of calcification bears no resemblance to that noted in dermoid cysts or uterine fibromyomas. Clinically, the uterus was normal to bimanual examination, and the ovary was felt to be very hard and movable. The other fibroma was a large solid tumor with multiple, finely stippled areas of calcification with no definite arrangement and no ringlike calcification about them.

Figure 2*b* shows the roentgenogram of the specimen. The density of these areas is about the same as that observed in the uterine fibromyomas, but the size and distribution of the calcium is not similar.

The diagnosis of a calcified ovarian tumor other than dermoid must be based on exclusion. If one is able to conclude that the type of calcification bears no resemblance to those previously discussed, and if urologic studies show the area to be outside the urinary tract, then it may be safe to assume that the area is in the ovary. However, so little is known of the roentgenographic appearance of these rare calcifications that the safest course is to make a questionable diagnosis.

The problem of calcification in tuberculosis of the female urogenital system may give rise to difficulty in differential diagnosis, but as a rule there is no similarity to the calcifications discussed in this paper. I have seen a few cases in which the tuberculous lesions have calcified in both fallopian tubes and ovaries. These lesions were characterized roentgenographically by very fine pin-point, faintly opaque areas following the course of each tube and faintly stippling each ovary.

Fig. 2*a*.—Ovarian dermoid. Note irregular bone and complete cyst wall enclosing dark area.
b. Roentgenogram of ovarian fibroma specimen. There is no calcium wall around the mass and the individual opaque areas are much smaller than the usual calcifications in uterine fibroids.
c. Solid calcified mass definitely outside soft tissue shadow of the uterus. The opaque area bears no resemblance to other calcified pelvic tumors, is the size and shape of the ovary, and is in the usual position of the ovary.

The differential diagnosis of the calcified tumors of the female generative tract should be made on the basis of general arrangement, size, density, distribution, number and position of the opaque areas. No attempt can be made here to differentiate these calcified masses from those occurring in the lower urinary tract. Usually, however, there is no likelihood of confusing calcified fibromyomas with ureteral or vesical calculi, but occasionally the occurrence of a single tooth or piece of bone in an ovarian dermoid may give rise to considerable difficulty (Fig. 3*b*). When the calcification is not typical or a cyst wall enclosing a dark mass is not visualized, then urologic studies must be resorted to for accurate diagnosis.

In addition to urinary tract calculi, the opaque areas in the generative tract must be differentiated from residues of opaque medication in the gluteal regions, barium retained in sigmoid diverticuli or in the rectum, parasitic cysts and calcified blood vessels. Weber has coined the term "roentgenologic look" in connection with his investigation

of the intestinal tract and most radiologists recognize with ease the "look" of opaque media in the bowel or muscles, the ring-shaped and linear calcified vascular areas, the fairly large encysted parasitic cysts or other calcified areas in the muscles about the pelvis.

CONCLUSIONS

1. Uterine fibromyomas containing calcium may be readily recognized by the multiple punctate areas 1 to 3 mm. in size, closely grouped and at times encircled by a calcium ring. These opaque areas are not the complete whiteness of teeth or dense bone.

2. Calcified dermoid tumors of the ovary may be recognized by the presence of clearly defined teeth but, when these areas are not present, the dense amorphous mass of bone usually present is characteristically a single mass of no regularity and of uneven density. The general, over all density, however, is almost the complete opacity of tooth structure.

3. When opaque areas are lacking and a soft tissue tumor is visualized, the slightly dense, soft tissue ring enclosing a less dense soft tissue mass is helpful in making the diagnosis of an ovarian dermoid tumor. The rectal wall enclosing a collection of gas is usually distinctly thinner and of uniform thickness in comparison to the wall of the dermoid tumor which, when studied pathologically, will show a variation in thickness in some areas.

4. The roentgen diagnosis of calcified ovarian tumor other than dermoid must be made by excluding all other possible opaque areas.

5. Technically excellent films are a necessity for accurate diagnosis of calcified pelvic tumors.

FIG. 3*a*.—Dermoid tumor of the ovary showing a group of well formed dense teeth in the pelvis and another group over the sacro-iliac joint. Figures 3*a*, *b*, and *c* show the usual variation in these tumors.
b. Single dense tooth in large ovarian dermoid tumor. Note cyst wall paralleling ilium and enclosing radiolucent cyst content.
c. Dense amorphous mass of bone in ovarian dermoid cyst. Note cyst wall.

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ABSTRACT OF DISCUSSION

Dr. Jesse B. Johnson, Galveston: Dr. Stevenson has attacked a difficult problem but has approached it from a specific angle and has done it well.

Calcification in different portions of the body may occur as friends or enemies. Personally in a high percentage of instances I had considered them as friends or reparative processes, in as much as calcium is found in all the body fluids and tissues. They are considered reparative particularly in the tuberculous lesions of the lungs, glandular systems, *et cetera*. However, it is well known that calcified cusps of valves of the heart decrease the elasticity of closure and therefore do harm.

Since so little is known of the biochemical change in these pathologic calcifications I asked Dr. Meyer Bodansky to give me a paragraph on this subject and quote him as follows:

"The mechanisms involved in the deposition of calcium in pathological conditions differ little if at all, from those involved in physiologic ossification, and for nearly a half century it has been recognized that both are dependent on physicochemical reactions. The inorganic phase of bone and that of pathological calcifications are similar in composition; in both, the principal constituent seems to be the mineral carbonate-apatite, or dahlite. In the present state of our knowledge it is impossible to describe adequately the manner in which calcification occurs outside the normal sites of ossification, but we recognize the relation of such calcification to the local lesions, necrosis, liberation of free fatty acids which may combine with calcium, hyalinization, the significance of the calcium and phosphorus concentrations in the blood, the participation of endocrine

COLLEGE OF PHYSICIANS OF PHILADELPHIA

factors, notably the parathyroids, and the specific effect of the enzyme phosphatase. This enzyme acts at the site of calcification by liberating phosphate from organic combination, thereby increasing the concentrations of calcium and phosphate ions above the solubility product and causing the precipitation of calcium phosphate at the site of abnormal calcification."

Dr. Stevenson's description of calcification in myomata, dermoids and some of the solid ovarian tumors are classical and should be borne in mind by all of us.

One other source of difficulty in diagnosis was the calcified extra uterine pregnancy that occurred after early rupture, that was unoperated upon and presented quite an irregular, bizarre mass that could not be positively identified.

Calcification in localized tuberculous peritonitis has been observed by us to appear as small, isolated, rounded nodules on the sides of the broad ligament area, but are indeed rare.

Dr. J. W. Cathcart, El Paso: Dr. C. A. Stevenson is to be commended for calling to our attention the necessity for scrutinizing the walls and contents of dark areas so frequently seen in the films of the female pelvis and which are so easily passed as gas in the rectum. By keeping dermoid cysts in mind, we should occasionally be rewarded by making a positive diagnosis. That the primary object of the film does not focus attention on these translucent shadows is doubtless responsible for many dermoids going unreported from the x-ray film.

Dr. Stevenson's report of twenty-six positive x-ray findings in fifty-two cases parallels very closely that of Dr. C. A. Good in the section on roentgenology at the Mayo Clinic, who recently reviewed their cases covering a five-year period and concluded that from 40 per cent to 50 per cent of dermoid cysts of the ovary gave positive or presumptive radiological evidence. The surgical pathologist on the same series reported 37 per cent showed evidence of calcification.

Fibroid tumors occasionally give such very definite calcified shadows that they are unmistakable, but doutbless many calcifications of a lesser degree are entirely overlooked. Here again the primary object of the radiogram and the frequency of extraneous shadows in the rectum . . . coupled with the difficulty of having the patients return for a recheck is often responsible for failure to report on these shadows. This paper should encourage more careful study of these occasional shadows.

EFFECT OF POSTURE ON HYPERTENSION

Patients with high blood pressure should be studied with regard to the effect of posture on the hypertension and those in whom the pressure falls markedly when confined strictly to the recumbent posture should have their urinary tracts studied by x-ray, and if nephroptosis (downward displacement of the kidney) is found some supportive measure for the latter should be instituted, William S. McCann, M. D., Rochester, N. Y., declares in *The Journal of the American Medical Association* for August 24 in a paper prepared in collaboration with Monroe J. Romansky, M. D., also of Rochester.

The author says that such a study of the effect of posture on blood pressure should be made by comparing the pressure when standing upright with that found when lying flat.

By supporting the kidneys by such measures as corseting, the blood pressure may be lowered and stabilized and many of the symptoms which accompany the hypertension may thus be relieved. It is pointed out, however, that "nephrotosis does not always result in hypertension."

SOME EPITHELIAL TUMORS OF THE EYELIDS AND THEIR MANAGEMENT*

S. K. STROUD, M. D.
AND
C. DUNCAN STEWART, M. D
CORPUS CHRISTI, TEXAS

In presenting this communication it is our desire to stimulate interest in a subject which we feel has not been given the attention it deserves, namely, epithelial tumors of the eyelids. Although these tumors are the concern of the entire profession, they are of particular interest to the ophthalmologist, dermatologist, surgeon, radiologist, and pathologist. Perhaps the overlapping of these fields partially accounts for the apparent neglect. The importance of lid tumors was first impressed upon one of us several years ago when histological examination was made a routine procedure on all tissue removed from the eyelids, regardless of clinical impression. It was the conflicting opinions expressed by a number of competent pathologists, as well as clinical disagreement, that provoked this report.

A review of the literature failed to reveal a complete or satisfactory classification of lid tumors. Probably one of the most complete is that reported in 1937 by O'Brien and Braley.[10] However, this also leaves much to be desired. We have therefore attempted to classify epithelial tumors as given in table 1.

TABLE 1.—*Classification of Epithelial Eyelid Tumors.*

I. Benign
  A. Those which rarely or never become malignant
    1. Sebaceous cyst (Chalazion)
    2. Multiple benign cystic epithelioma
    3. Molluscum contagiosum
    4. Verruca Vulgaris
    5. Syringocystadenoma (sweat gland adenoma)
    6. Hydrocystoma (sweat duct cyst)
  B. Those which occasionally become malignant
    1. Nevus Pigmentosa
    2. Verruca Seborrhoeica (seborrhoeic wart)
  C. Those which frequently become malignant
    1. Keratosis senilis
    2. Cornu cutaneum
    3. Meibomian adenoma
II. Malignant
  1. Basal cell carcinoma
  2. Basosquamous cell carcinoma
  3. Squamous cell carcinoma
  4. Malignant melanoma (Melanocarcinoma)

It is of course realized that there are some who will disagree with this classification. Seborrhoeic keratosis, for example, is listed here as a tumor which occasionally becomes malignant. While MacKee and Cipollaro[7]

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state that this lesion is definitely precancerous, Becker[1] maintains that malignant changes are almost never seen. In regard to meibomian adenoma, we have based our opinion largely on the study of Hagedoorn[6] who found that 50 per cent of these tumors become malignant.

Although in this paper we are primarily interested in precancerous lesions, it may be well in passing to point out a few facts regarding the frankly malignant group.

It has been stated by Geschickter and Koehler[4] that cancer of the eyelid comprises from 3 to 5 per cent of all epitheliomas. The majority of these eyelid carcinomas are basal cell. Even so, epithelioma is not of frequent occurrence compared with the incidence of other lid tumors. This was shown by O'Brien and Braley,[10] who found only fifteen carcinomas among 100 consecutive tumors of the eyelids. Reese, in his discussion of O'Brien and Braley's paper, reported a consecutive series of 100 cases from the Eye Institute, in which the percentage of carcinomas was 28.

Birge,[2] in studying 230 cases of eyelid and conjunctival cancer seen at the Mayo Clinic, found 60 per cent to be basal cell, 14 per cent basal squamous cell, and 26 per cent squamous cell. Montgomery[9] has asserted that 20 per cent of clinically basal cell epitheliomas are transitional types.

As regards malignant melanoma, it is the opinion of Traub and Keil[12] that the "common mole," or intradermal nevus, never becomes malignant. According to these investigators, it is only nevi of the junction type, *i. e.*, where the origin of the tumor is at the epidermodermal junction, that develop into malignant melanomas. Becker has called nevi of this type "cellular nevi," supporting the widely accepted theory of Masson that they arise from the clear cells of the basal layer. This theory further assumes that the clear cells originate from the sheath of Schwann. Ebert[3] is in accord with Traub and Keil that this type of nevus cell is the parent cell of malignant melanoma. These junction types, or cellular nevi, are clinically characterized as smooth, non-hairy, pigment-spots. They frequently make their appearance later in life than ordinary intradermal nevi. Miescher and von Albertini[8] stated that such nevi constituted only a small percentage of the 100 nevi studied by them.

As previously stated, however, it is primarily upon the precancerous group of lesions that we wish to focus attention, raising the question as to how certain it may be that many of these so-called benign tumors are not actually or potentially malignant. In any event the clinical impression cannot be relied upon to establish a diagnosis. It must also be remembered that many of these tumors have their origin on the lid margin, that is to say at a mucocutaneous junction, and cannot therefore be compared strictly with the same tumors arising from cutaneous epithelium. In this location the clinical appearance, course, and prognosis of the various lesions are often altered.

The following case reports will serve to illustrate a number of our points.

REPORT OF CASES

Case 1.—H. P. H., a white man, aged 40, presented a small freely movable keratotic lesion, 2 mm. in diameter, projecting 1 cm. from the upper lid margin at the junction of the middle and outer one-thirds, of about three months duration. The preauricular lymph nodes were not enlarged. The patient stated that he had had a similar growth in the same location for about one year, which he had removed by manipulation. The present lesion appeared almost immediately after this and had grown rather rapidly, especially since he began rolling it between his fingers. The clinical impression was that of a benign lesion. Accordingly it was removed flush with the lid margin and the base touched with cherry-red cautery.

Histologic examination disclosed a very fine fibrous stroma which was infiltrated with lymphocytes. There was a heavy keratinous layer on the exterior of the growth. The epithelium was thick, irregular, and contained many epithelial pearls. There were masses of epithelial cells extending irregularly into the stroma without regard for basement membrane. The diagnosis was cutaneous horn with early malignant change (flat cell carcinoma, grade 1).

This patient has now been followed for approximately one year, and at a recent examination there was no evidence of local or metastatic recurrence.

In this instance, although the tumor clinically appeared benign, the history of manipulation, recurrence and rapid growth could not be disregarded. Proof of early malignancy was shown by microscopic study.

Case 2.—H. J. D., a white woman, aged 30, housewife, reported for removal of a smooth, light brownish, sessile tumor of two years duration, located on the upper lid margin at the junction of the middle and outer thirds. The lesion began as a small brown pigmented spot which had grown slowly until two weeks before examination. Since then the tumor, accompanied by erythema and slight tenderness, had almost doubled in size. Examination revealed a small tumor about 3 by 3 by 4 mm. in size, slightly hyperemic, freely movable, and not attached to the tarsal plate. Although nearly the color of normal epithelium, the tip had a brownish-purple cast. The lid was not indurated and the preauricular lymph nodes were not enlarged. The clinical impression was that of a probably benign lesion. The growth was removed flush with the lid margin, and the base thoroughly cauterized.

Microscopic examination showed a nodule composed of masses of spindle cells, many of which contained granules of golden brown pigment. There were some groups of round to polyhedral cells interspersed. The spindle cells had small, dark, oval nuclei, while the round cells had larger round to oval nuclei. Similar groups of cells without pigment extended to the base

of the nodule. Removal of this tissue apparently did not remove all the growth. The diagnosis was malignant melanoma.

The slides were further studied by two other pathologists, one of whom stated that the tumor was benign, while the other reported melanocarcinoma. The sections were then sent to Dr. S. W. Becker of the University of Chicago, who reported that the lesion was distinctly malignant melanoma.

The patient was seen a few weeks after cauterization, at which time the wound was completely healed. Unfortunately, however, she did not return for further observation.

This case illustrates the fact that any pigmented nevus which shows abnormal changes —in this instance, tenderness and increase in size—must be regarded with suspicion. Further, it demonstrates that pathologists will often disagree in diagnosing malignant melanoma. The histologic criteria for diagnosis in this disease are not well laid down. Greenblatt[5] emphasized this fact, and also suggested that there may be borderline cases.

As regards therapy, all agree that malignant melanoma is radio-resistant, although Pack and Livingston[11] have recently stated that about 2.5 per cent are radiosensitive. We believe that the treatment of choice is wide surgical excision of the lid followed by plastic repair.

CASE 3.—C. N., a Mexican man, aged 30, presented a small growth on the upper lid margin at about the junction of the outer two-fifths and inner three-fifths, present for fifteen days. Examination showed a tumor of split pea size (8 by 2 by 1 mm.), skin colored, sessile, with a broad base and having a rather nodular appearance. The lesion was somewhat friable but freely movable and non-indurated. There were a few translucent keratotic projections from the outer edge of the lid margin adjacent to the growth. The clinical appearance suggested molluscum contagiosum. No enlargement or tenderness of the preauricular lymph nodes was demonstrable. Clinically the lesion was benign. Excision and cauterization were performed.

The patient was then seen by another oculist whose clinical opinion, based upon one or two of the fine keratotic projections which had not been removed, was that the growth was malignant.

Microscopic study showed an abnormal proliferation of epithelium with extension into the corium for a short distance. Part of this epithelium was well differentiated and showed some keratinization. Elsewhere were seen masses of rather undifferentiated cells with numerous mitoses having no respect for basement membrane. The diagnosis was flat cell carcinoma, grade 2.

The slides were then examined by two other pathologists who declared there was no evidence of malignancy. However, a fourth pathologist concurred in the opinion that the tissue was malignant. The sections were recently studied by Dr. P. A. Delaney, pathologist at the University of Chicago, who thought that they showed carcinomatous change.

As the tumor recurred almost immediately following its removal, roentgen therapy was advised. Thereafter, as the patient was lost from observation, the end result is unknown.

In this instance, not only the clinical opinions differed, but five pathologists also disagreed as to the evidences of malignancy. The therapeutic indication, however, is more clear cut than in the second case, as this type of tumor is highly sensitive to either radium or x-ray radiation. Therefore, even if the tumor is malignant, in the absence of metastases, we can practically assure our patient of complete recovery with little or no residual deformity. This is obviously the logical therapeutic procedure.

CASE 4.—M. McD., a white man, aged 54, came in complaining of considerable ocular redness and discomfort due to a growth on his right upper eyelid, which had begun six years previously following a tearing injury. The tumor had been "burned off" four times but always recurred immediately in a somewhat larger form. Examination revealed a rounded, slightly umbilicated, whitish, firm lesion about 8 by 2 mm., which nearly covered the medial fourth of the conjunctival surface of the right upper lid. It was firmly attached to the cartilage. There was some induration of the lid but no preauricular lymph node enlargement. Histologic study showed the section to be composed of masses of cells which were irregular in size, shape, and arrangement. The fibrous tissue stroma was very scanty. There was slight differentiation in some areas toward prickle cells. The diagnosis was flat cell carcinoma, grade 3.

This patient was subsequently referred for roentgen therapy, and when last seen six months later showed no evidence of the former growth.

This case emphasizes the fact that repeated recurrences of a tumor following its removal should at once arouse suspicion of malignancy. Although no metastases were evident at the time of the last examination, the ultimate outcome remains to be seen.

CONCLUSIONS

The foregoing cases illustrate several dangers encountered in the management of apparently insignificant tumors of the eyelids. While most of the following observations have from time to time been noted in the literature, they are too frequently disregarded in routine practice.

Most significant is the fact that these tumors are not susceptible to gross classification and diagnosis. In spite of the most careful clinical examination, an apparently innocent tumor may be the seat of early malignant change. This, if carelessly removed or allowed to remain, may cause destruction of the eye or loss of life through metastases. In view of this difficulty, routine histologic examination of all tissue removed from an eyelid must be considered essential.

It can hardly be denied that trauma plays an important part in the etiology of lid malignancy. When such history is obtained, the benign or malignant character of the neoplasm must be determined by histologic examination.

Until further knowledge of these lesions is obtained, and a more perfect agreement reached among the clinicians and among the pathologists concerning the nature of certain

of the more benign types, it is only wise to form a clinical classification that places some of the hitherto acceptedly benign tumors into an intermediate group of potentially malignant growths.

It is highly important that these patients be instructed to report at intervals over an adequate period of time to determine the presence of recurrence or metastasis.

Finally, we wish to make this point clear: although we certainly do not consider a large percentage of lid tumors as seen in routine practice malignant or even premalignant, we do believe that our knowledge of these small growths is exceedingly scant; that many bear the elements of potential malignancy; and that until we know more accurately the histopathology of these tumors, their treatment should be more careful than in the past.

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615 Medical-Professional Building.

ABSTRACT OF DISCUSSION

Dr. John F. Pilcher, Corpus Christi: This paper is certainly a challenge to the pathologist as well as the ophthalmologist. Tumors of the eyelids are particularly difficult for the pathologist for several reasons.

Tumors located on the eyelids cause discomfort and alarm to the patient earlier than in other locations, so the tumors removed for examination are smaller, less well developed and so less characteristic. It is necessary to preserve tissue in this location so these growths are removed with very little of the surrounding tissue. Moreover, lid tumors have not been studied as carefully as other tumors. All these factors lead to confusion as is well shown in the cases reported in this paper.

The case of melanoma has caused the greatest disagreement among both clinicians and pathologists. We cannot always be sure whether these growths are actually or potentially malignant. If they are completely removed and do not recur, the question of their malignancy is never settled. The problem is more acute than with other tumors because of the hopelessness of these cases if metastasis has occurred. The best we can do, in our present state of knowledge, is to remove them completely and hope for the best as far as spread or recurrence is concerned.

The other cases present squamous cell growths of various types. Cutaneous horns in any locations may become malignant. Although it is sometimes difficult to determine if there is malignancy starting in a horn, there is no doubt in this case.

The tumor in case 3 reported by the essayists looked like a harmless tumor and seemed benign to about half the pathologists who examined it, yet it turned out to be malignant clinically. To call such a case "precancerous" is merely dodging the issue. Pathologists may some day learn enough so that they will be able to say with certainty whether or not these borderline cases are malignant.

Clinicians and pathologists must certainly cooperate in the careful study of these cases if we are to learn enough about them to handle them correctly. The pathologist should be given the opportunity to see the lesions before removal whenever possible, and should have a chance to follow the course of the disease. In this way we can form sound judgments when these cases come to our attention.

Dr. L. M. Garrett, Corpus Christi: In treating the large group of malignant epithelial tumors of the eyelid that are sensitive to radiation, I use high voltage x-rays almost exclusively. I feel that x-ray radiation is superior to radium for several reasons, the two main reasons being that it is much easier to shield the globe from x-ray than from radium and that a more homogeneous radiation in the tumor is obtained with x-ray. I prefer high voltage x-ray with heavy filtration to low voltage x-ray with low filtration, since I believe much less scarring and cartilage necrosis are produced with the shorter rays.

My procedure is as follows: The eye is anesthetized with pontocain, and a lead shield is slipped between the lid and the eyeball. An area somewhat larger than the tumor is outlined by means of lead or lead rubber shields, laid in contact with the lid. The factors of radiation used are 200 kilovolts, constant potential, 15 milliamperes, 25 to 50 cm. distance, 2 mm. of copper and 1 mm. of aluminum filters. The daily dose is from 250 to 400 *r* and the total dose is 4,000 to 5,000, depending on the size of the field. With this dosage a moist *epidermite* develops and rapidly heals, leaving a minimum of scarring and deformity.

My results have been highly satisfactory, using this method of treatment.

EXPLAINS THE TERM "MUSCLE BOUND"

Explaining the term "muscle bound," *Hygeia, The Health Magazine* says that it is a descriptive but not a scientific term "popularly applied to an abnormal muscular development which may restrict quick and supple movements, especially of the arms and shoulders. When a muscle is used a great deal, it tends to become shorter and hence to produce a strong pull on weaker sets of opposing muscles, causing in certain cases some deformity. For example, the large muscles on the front of the chest may be so overdeveloped as to pull so strongly against the weaker muscles of the upper back that a 'round shouldered' condition may develop."

There is no evidence to substantiate the impression that the milk-producing ability of women decreases with age, *Hygeia, The Health Magazine* declares. If the prospective mother can adjust her mental environment and decide that she is going to nurse her baby, she probably will in spite of her age.

ANESTHESIA IN PERORAL ENDOSCOPY*

J. B. NAIL, M. D., F. A. C. S.
WICHITA FALLS, TEXAS

Safe and adequate anesthesia is among the first essentials for good work in bronchoscopy and esophagoscopy. This paper will deal with anesthesia both local and general, but will be better understood if a few of the indications for bronchoscopy are enumerated.

Jackson[7] advises us that a few years ago endoscopies were performed chiefly for the removal of foreign bodies in the food and air passages. At the present time, bronchoscopes and esophagoscopes are used ninety-eight times for diagnosis and treatment to where they are used twice for foreign body extraction. Bronchoscopy in diagnosis and treatment is recommended only after the usual diagnostic procedures are found inadequate in pulmonary conditions, the most urgent indication as well as most frequent being clinical or roentgenologic evidence of bronchial obstruction. Whether it be obstructive atelectasis or obstructive emphysema or simply a wheeze indicating partial obstruction, the indications for diagnostic bronchoscopy are urgent. Bronchial tumors, bronchiectasis, pulmonary abscess, empyema, postoperative massive collapse of lung, suspected tuberculosis with negative sputum, asthma, chronic tracheobronchitis, and pneumonitis are other conditions often requiring direct inspection afforded by the bronchoscope to give intelligent consultation to the pediatrician and internist. It may be to obtain direct specimens for culture and vaccine, the securing of a bronchoscopic biopsy, or removal of accumulated viscid secretions for palliative purposes and to observe its prophylactic effect.

This review of indications is almost self explanatory in the choice of anesthesia in endoscopic diagnosis and treatment of pulmonary conditions. It is apparent that the hazard of a general anesthetic is too great to give it consideration. On the other hand, the local anesthetic must be such that discomfort and trauma are satisfactorily controlled and such as to render the patient sufficiently cooperative to enable the operator to use his skill rather than his strength.

Vocal Anesthesia.—The patient, his family and his physician, if unacquainted with this type of work, are likely to look upon it as a battle or wrestling match of four against one, the patient being the underdog, because the shoulders and knees must be held down and the head in the desired position when a rigid tube is passed. This is not done forcefully and when performed gently, it is not painful and is only mildly uncomfortable if the patient is coöperative. This phase should be explained to all. According to Putney,[11] the patient should have it explained that he will have one of two wholly unwarranted fears; first, a feeling of suffocation, or an inability to inhibit coughing. In Jackson's lectures during his course, he referred to the admonitions to the patient as "The sermon on relaxation." When a patient learns the bronchoscope, and bronchial speculum is a better word, in position has relieved suffocation, and that it will keep the airway open, also that his relaxation and deep breathing will shorten the duration of the procedure appreciably, and that at no time will he experience anything painful, after having been given these explanations and assurances, he will regard one's veracity favorably if the operator is conscientious and diligent in the preparation and application of the local anesthetic.

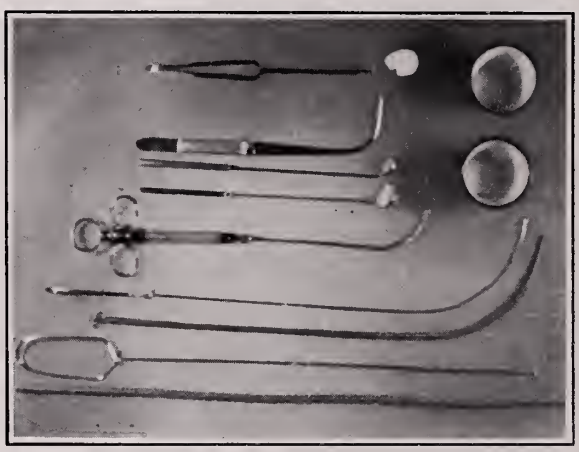

FIG. 1. Instruments used in endoscopy under local anesthesia: cross action forceps, laryngeal mirror, laryngeal syringe, and Chevalier L. Jackson's tracheal catheter with stylet. The pharynx, larynx, and pyriform sinuses are painted with 10 per cent larocaine, using cross action forceps. Two and one-half per cent larocaine is dropped into the larynx with a laryngeal syringe, using a laryngeal mirror and head mirror. After five minutes, these procedures are repeated and 1 cc. of 2.5 per cent larocaine is dropped into each bronchi through the laryngeal catheter.

Sedation.—The apprehension is greater in endoscopic cases; consequently, these patients require a greater degree of sedation. It is good practice to give robust patients one-fourth grain morphine and 1/150 atropine hypodermically, and 5 grains of nembutal by mouth one and one-half hours before operation, and repeat the medication without the atropine again forty-five minutes before the scheduled endoscopy.

Children tolerate large doses of morphine remarkably well. The dosage is calculated according to Young's rule, taking the standard adult dose of morphine as one-half grain.

*Read before the Section on Eye, Ear, Nose and Throat, State Medical Association of Texas, Dallas, May 15, 1940.

Jackson, Clerf,[5] and Putney do not advocate the use of local or general anesthesia in children under 6 years of age, relying upon liberal sedation. Having used 2.5 per cent larocaine for Proetz treatment of sinuses in children, I have found it also safe and practical as a local anesthetic for introducing the bronchoscope in young children. It is used more liberally in older children, and those above 12 years of age tolerate it as well as adults. Larocaine has stronger anesthetic properties than cocaine. Its toxicity is almost negligible.

A cotton pledget saturated with 10 per cent larocaine is applied to each pyriform sinus, the epiglottis, pharynx, and larynx with the cross action forceps. This is followed immediately by the instillation of 2.5 cc. of 2.5 per cent larocaine into the larynx and trachea. The instillation is accomplished

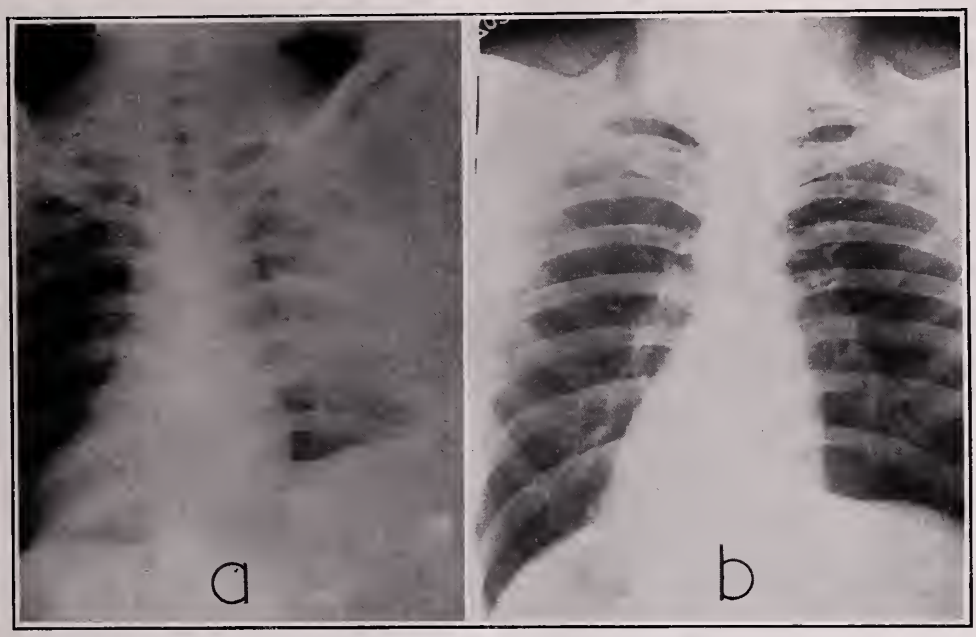

FIG. 2*a*. Right lung abscess before bronchoscopic drainage with medical treatment.
b. Roentgenogram in same case five months later, after bronchoscopic drainage plus medical treatment. Local anesthetic was employed.

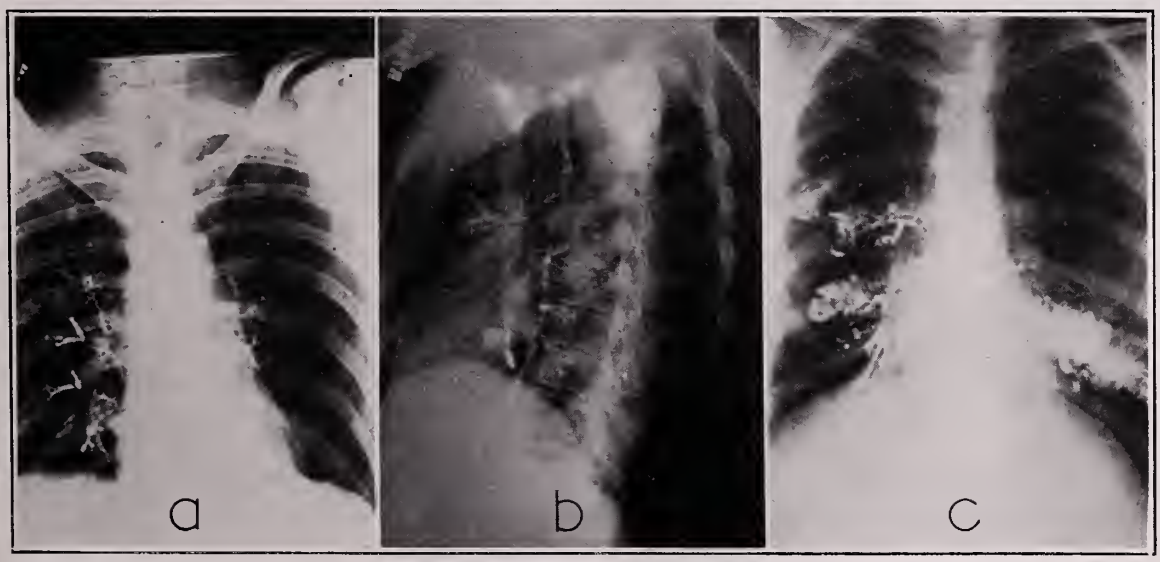

FIG. 3*a*. Roentgenogram showing bronchiectasis in its early stage. Patients in this stage can be completely relieved, if not cured, by bronchoscopic drainage and autogenous vaccine made from material obtained by bronchoscopic drainage.
b. This shows a lateral view of the same case of early bronchiectasis. Local anesthesia is used in this type of case.
c. Roentgenogram showing the late stage of bronchiectasis. We are unable to cure patients in this stage but, according to Jackson, such patients having bronchoscopic drainage along with medical treatment can live much more comfortably and their lives can be prolonged several years. A local anesthetic is employed.

with laryngeal mirror syringe and canula, and is instilled during inspiration. The patient is allowed to rest five minutes and these procedures are repeated. The stylet type of laryngeal catheter, devised by Chevalier L. Jackson[8] for lipiodal injection, is next inserted into the trachea by ocular guidance, using the laryngeal mirror. One must always remember to apply a small amount of mineral oil on the stylet to effect its removal. Through this catheter, 1 cc. of 2.5 per cent larocaine is instilled into the right and left bronchus by having the patient lean to the desired side. The bronchial instillation of the anesthetic reduces the multiple bechic blasts or short convulsive type of coughs to a minimum, which is most annoying to the operator and evidence of discomfort to the patient.

After carefully following the regime given, I have not found it necessary to apply additional anesthesia after introduction of the bronchoscope. Our patients requiring weekly bronchoscopic drainages have not been reluctant to return for repeated endoscopic treatments.

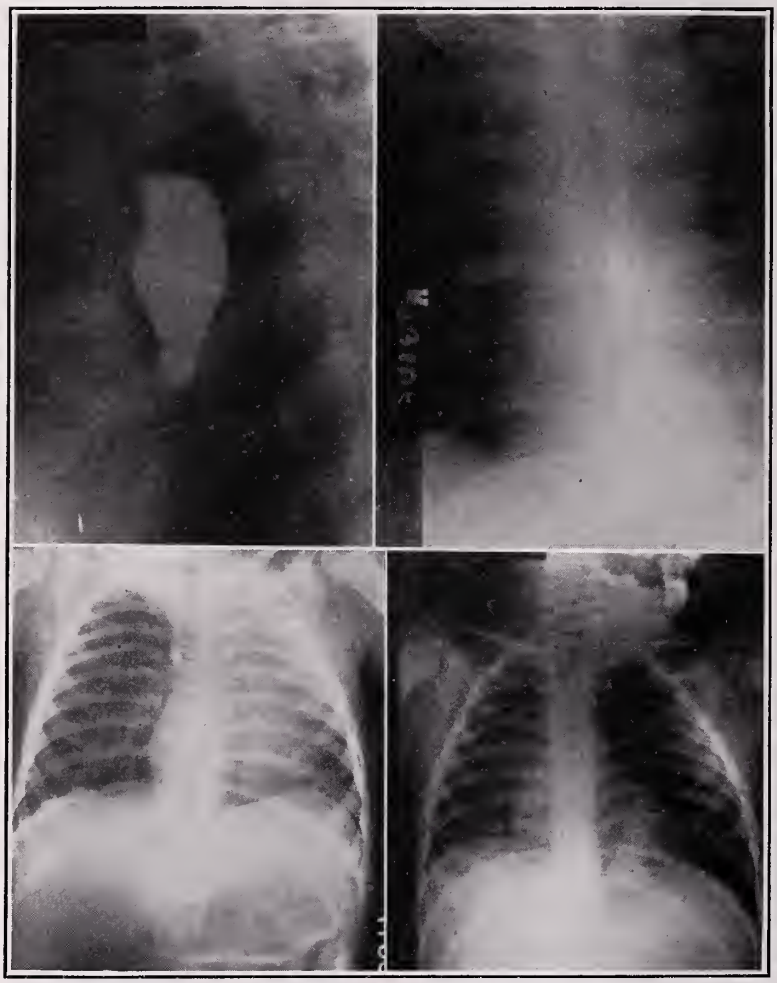

FIG. 4. (Top left). Roentgenogram showing stricture of the esophagus in a patient 55 years of age, due to esophagitis twenty years previously. The appearance is that of complete atresia. A grain of corn was found in the stricture.

(Top right). An esophagoscope has been passed and a filiform bougie dilator passed through the esophagoscope. By gradually increasing the size of the bougie, the esophagus was dilated sufficiently that ordinary foods pass comfortably. Avertin was used for esophagoscopic examination and diagnosis. Successive dilatations were done under local anesthesia.

(Below). The roentgenogram on the left shows a case of atelectasis in a child 2 years old, the left bronchus being plugged by a Mexican bean which had been lodged in the bronchus four days. The roentgenogram on the right was made after the bean had been removed, the atelectasis having been relieved. Avertin was used in this case.

Esophagoscopy requires the same sedation; the only local anesthesia necessary is a 10 per cent solution of larocaine which is gargled and repeated ten minutes later. This removes the gag reflex and as the esophagus contains no pain fibers, anesthesia of its walls is unnecessary.

With all the refinements of local anesthesia, which has been perfected by the Jacksons, Clerf, Putney, and others, some form of general anesthesia seems to meet the requirements better for the average operator in difficult foreign body cases such as sharp edged or stellate shaped objects in the air and food passages; also in cases of cardiospasm, as well as foreign body cases in children under 12 years of age. In weighing the advantages and disadvantages of both local and general anesthetics in endoscopic procedures in children, we must realize there is less trauma to the larynx, which means less subglottic swelling and less likelihood of subsequent tracheotomy, when a general anesthetic is used. A five millimeter bronschoscope passes as readily and with about the same amount of trauma under general, as the four millimeter bronchoscope under local, anesthesia in a small child.

Avertin, a basal anesthetic, also known as tribromethanol, meets the requirements in bronchoscopy and esophagoscopy. It has been used extensively by Arbuckle[2] at Barnes Hospital in this type of work. Mueller[9] reports 5,000 avertin administrations in which it was used in almost every kind of operation, including bronchoscopy and esophagoscopy, many to aged patients in their seven-

ties. Every case came through satisfactorily as far as the anesthetic was concerned.

Bernheim[4] reported the use of avertin in University of Chicago Clinics, and in 500 consecutive administrations, they had no deaths directly attributable to the anesthetic.

Pangman[10] reviewed 800,000 cases in the literature and quoted enthusiastic reports from Dandy of Baltimore, Ransom of Ann Arbor, Gardener and Lamb of Cleveland Clinic, Brown of Montreal, and others who used avertin extensively and gave eulogistic reports of its use.

Beecher,[3] in a review of 4,000 administrations at the Massachusetts General Hospital, found seven deaths which he attributed to avertin. Three of these he eliminated, as these cases would have been known contraindications for its use at the present time.

According to Adams[1] of the Mayo Clinic, Rochester, Minnesota:

"Young children possess a relatively high tolerance to the rectal administration of tribromethyl alcohol in amylene hydrate (avertin with amylene hydrate), and the use of this anesthetic is often of advantage. This is true particularly in certain operations and manipulations about the respiratory passages. As an example, one may cite the removal of a foreign body from the trachea or esophagus of a young child. The rectal administration of this agent usually produces sufficient anesthesia for completion of the procedure. Too deep a narcosis is not desirable, and it is safer to maintain the pharyngeal and laryngeal reflexes to a certain degree. The average dose ranges between 80 to 100 mg. per kilogram of body weight; the dose may be increased slightly if the child is particularly robust. The solution should be instilled about ten minutes prior to the manipulation. The fact that the child is not completely relaxed and may cough or strain at times is not of particular disadvantage to the surgeon; when these signs are present, the child will barely be overdepressed. Equipment for administration of oxygen and for maintenance of a free airway should always be available."

Dr. Temple Fay[6] employs avertin as an anesthetic in the freezing treatment of cancer. Most of these patients show marked evidence of emaciation and weakness and apparently are very poor anesthetic risks. If they tolerate avertin satisfactorily, it should be considered safe for the average case.

Occasionally, a small amount of local anesthesia may have to be used in conjunction with it. Avertin tranquilizes the patient; places him in a state of passive submission for the operation. The lumen of the air or food passages is agreeably moist to facilitate the introduction of the bronchoscope or esophagoscope, but there is not the profuse stimulation of bronchial secretion one encounters with the other general anesthetics. With ether, this secretion always seems to obscure the foreign body just when it is in a favorable position for grasping with the forceps and the secretion often has to be

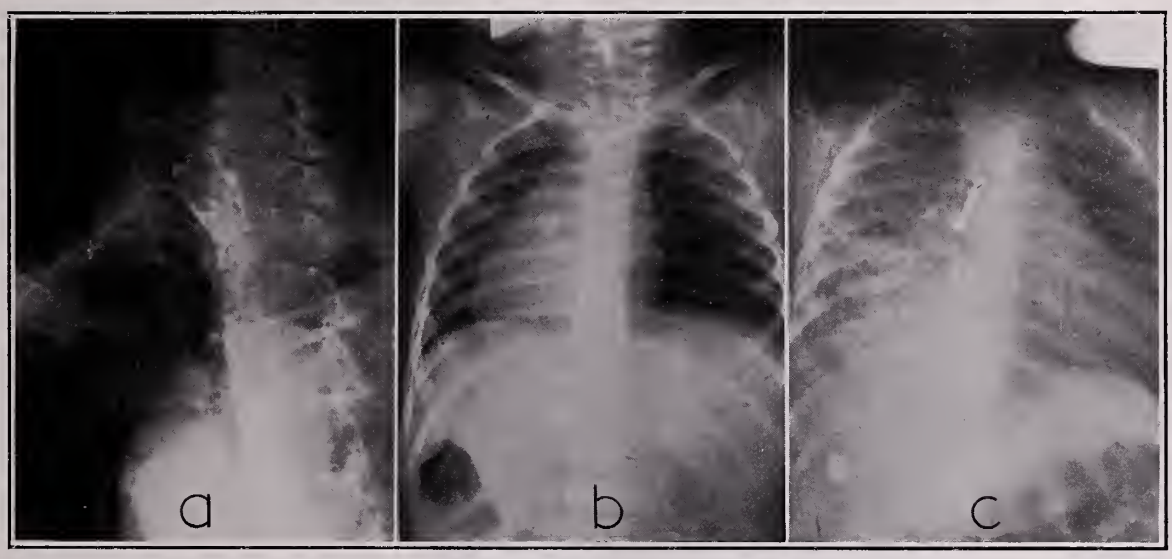

FIG. 5*a*. Roentgenogram showing the breast of a quail in the esophagus, which was removed under avertin anesthesia. The patient was 72 years of age. We were unable to determine the possible bony projections in this mass. A general anesthetic was thought advisable to prevent trauma or possible puncture of the walls of the esophagus. Avertin was used, which gave satisfactory dilatation of the esophagus to effect the removal of the foreign body safely.

b. Roentgenogram showing a triangular piece of tin used in anchoring window panes, lodged below the cricopharyngeal constriction in a child, 2 years of age. The tin was removed under avertin anesthesia, general anesthesia being employed because of the sharp cutting edges of the foreign body, which we considered hazardous to withdraw through the cricopharyngeal constriction without a general anesthetic.

c. Roentgenogram showing a machine screw in right bronchus of a child, 4 years of age. The screw had been in the right bronchus two years. The case had been diagnosed as penumonia complicated by pleurisy with effusion. A rib resection had been performed and drainage instituted, after which the child seemed to enjoy fair health. The child reported two years later with symptoms of chronic bronchitis and afternoon fever. A roentgenogram revealed the foreign body, which was removed. Avertin anesthesia was used. The patient had an uncomplicated recovery.

removed several times by suction before the extraction can be effected.

In only three cases out of eighty-nine consecutive administrations of avertin for endoscopic work have we had to use a small amount of local anesthesia in conjunction with it. It seems the consensus of opinion that to be thoroughly safe, avertin should be used to produce only basal narcosis and not as a sole anesthetic agent. It presents a natural sleep which comes on pleasantly and gives a certain degree of muscular relaxation, yet not sufficient muscular relaxation in the esophagus to permit a foreign body to pass further down, which makes it quite desirable in the removal of esophageal foreign bodies. The muscular relaxation produced by it is advantageous in dilatation in the treatment of cardiospasm patients. The respiration is quiet and even, which is ideal in tracheal or bronchial procedures. Avertin is not recommended when rectal or sigmoid disease is present because of the irritation it might produce. It is not advocated in patients with advanced hepatic or renal disease. The chief disadvantage of its use is that it requires more time. Also the patient must be kept under careful supervision with an airway and a means of giving oxygen and carbon dioxide until the pharyngeal reflexes have returned.

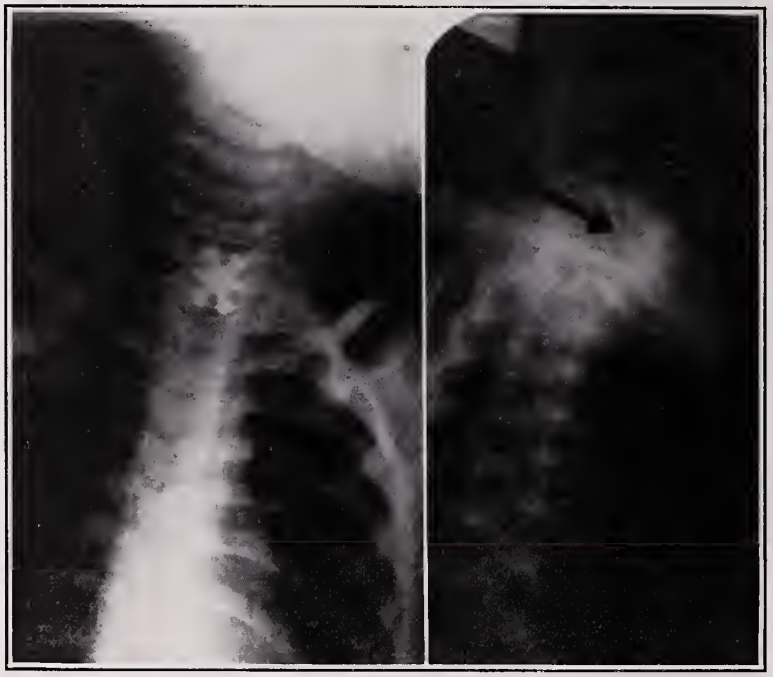

FIG. 6. Roentgenogram showing a playing jack in the esophagus below the cricopharyngeal constriction in a child 3 years of age. The object being a six pointed one, it was considered hazardous to remove it without some form of general anesthetic. Avertin was employed.

It is stated the preoperative hypodermic must be reduced to avoid danger of accumulated action of two depressive drugs. We do not give a preoperative hypodermic when avertin is to be administered. Most of the unfavorable reports in the use of this anesthesia are due to sedatives given prior to administration, the giving of too large doses, or giving it too rapidly.

The administration of avertin should be preceded the night before by a cleansing enema. It is administered in 2.5 per cent aqueous solution by rectum in doses ranging from 70 to 100 mg. per kilogram of body weight, but it has been our practice to give 80 mg. per kilogram of body weight in the average case. The instructions in its use must be carefully adhered to for satisfactory results. The solution must be freshly prepared and warmed to body temperature and not heated to a temperature at any time exceeding 104° (if heated beyond this temperature, it breaks down into hydrobromic acid, which might cause a necrosis of the bowel). It should be given thirty minutes before operation, allowing ten minutes for its administration. The narcosis produced by it may be lightened by the administration of 90 per cent oxygen and 10 per cent carbon dioxide and respiration is satisfactorily stimulated by caffeine sodium benzoate. It is always advantageous on completion of operation to administer the oxygen and carbon dioxide with an airway in position, and when it is used the pharyngeal reflexes usually return in from one to two hours.

Avertin is said to be eliminated entirely by the kidneys after first being neutralized by the liver while each molecule of avertin is paired by a molecule of glycuronic acid. Each cc. of avertin fluid contains 1 Gm. of avertin and .5 Gm. of amylene hydrate, which is the solvent. It is not within the scope of this paper to explain why a more rapid recovery from the avertin is experienced when oxygen and carbon dioxide is used immediately following the completion of the operation, but this has been our experience.

In summary, it has been our experience that:

1. Practically all cases of foreign body and even some cases of pulmonary diseases in which the bronchoscope is used in children under 12 years of age are better handled

under avertin than under local anesthesia.

2. Avertin used according to the 80 mg. table, alone or in conjunction with larocaine, renders safe and adequate anesthesia for difficult foreign body extractions in children or adults.

3. Sedation and larocaine meticulously administered renders safe and painless anesthesia for adults and older children.

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1300 Eighth.

ABSTRACT OF DISCUSSION

Dr. G. H. Wood, Big Spring: This paper has been so well presented that very little can be added by discussion. A happy medium has been reached when the author advocates some form of general anesthesia in certain cases. Different sections of our country develop different techniques in all surgical procedures. It is up to us to select the one that fits our practice best. The eastern clinics have pioneered in local anesthesia in bronchoscopy, and it is a pleasure to observe the team work that exists. Without a properly trained team of assistants the best laryngologist will encounter difficulties in local anesthesia. Those of us in the smaller cities can not easily develop the ideal technique. This is primarily due to lack of clinical material. Practice on the manikin and on anesthetized animals will not train us to overcome the struggles, fears, and secretions of the young child. Although I have handled the usual cases under local anesthesia, at times I have wished the patient were under general, and under deeply, before it was over. Ether has always been one of our safest anesthetics. The New Orleans bronchoscopists used ether a few years ago in all laryngeal and foreign body work. I do not think they have changed recently. Their results were satisfactory. The author reports eight-six cases in which avertin was used with complete relaxation of the patient. Since it does not produce the secretion that goes with an ether anesthetic, there is a distinct advantage in its use.

Dr. Abell D. Hardin, Dallas: As interns we are supposed to follow the routine of each service, but when we are out on our own, we are free to use our own pet methods. I have not found it necessary to use a general anesthetic in peroral endoscopy. I believe that there is a very definite danger, and no advantage gained by using general anesthesia.

The preparation of the patient consists in withholding food for six to eight hours before endoscopy. A barbiturate is given the night before and repeated next morning. An adequate hypodermic dose of morphine and atropine is given an hour before operation, which also helps allay apprehension. Formerly it was my custom before putting the patient on the operating table to make two or three applications of a 10 per cent solution of cocaine in the region of both superior laryngeal nerves in the pyriform sinuses. Since children do not tolerate cocaine, I wanted to find a local anesthetic, which could be safely used. Having adequate clinical subjects in the Baylor Dispensary for observation, we have been using pontocaine, 2 per cent solution, for the last year in adults and children as young as 2 years of age.

Our present technique is simply to spray pontocaine solution into the larynx with an atomizer, repeating the procedure several times over a period of fifteen to twenty minutes.

Patients with lung abscess, bronchiectasis, and foreign bodies of the esophagus, are so little affected by local anesthesia that they are able to leave the hospital almost immediately following endoscopy.

Cases of foreign bodies of the airways are hospitalized for observation for a short time only.

Dr. Nail (closing): I appreciate the frank discussion of my paper by Dr. Wood and Dr. Hardin. In reply to Dr. Hardin, I think I have used avertin anesthesia a sufficient number of times to know its limitations and that if used with the precautions given, it is a safe anesthetic. I refer him again to the slides shown for the type of case in which we use local anesthesia and for those which we advise avertin as an anesthetic.

HYOID BURSITIS*

L. A. NELSON, M. D.
DALLAS, TEXAS

Hyoid bursitis is a distinct clinical entity which, curiously enough, has apparently been overlooked or its symptoms have been incorrectly interpreted. I am sure all who practice our specialty have not infrequently encountered cases in which the complaint of the patient, in reference to the throat, could not be explained by physical findings in the nose or throat. These individuals may at times suggest a neurosis because of their persistence in regard to the location of their discomfort, yet, unless the region of the hyoid is examined, we may fail to find the site of the inflammation that is causing the symptoms.

A review of the literature revealed only one article, "Rheumatoid Disease in the Region of the Hyoid Bone," by Goldstern, which was published in German in 1936, and the essayist states "that in spite of zealous searching in the medical literature I could nowhere find the description of this condition." He reports observing eight cases.

Several years ago, I noted a syndrome of symptoms referable to the throat which included a distinct area of tenderness in the region of the greater horn of the hyoid bone, with sufficient frequency to arouse my interest in this subject. During the last two years, I have recorded a series of thirty-one cases. Recent observations, however, have convinced me that the occurrence of this condition is much more frequent than that figure would indicate.

*Read before the Section on Eye, Ear, Nose and Throat, State Medical Association of Texas, Dallas, May 15, 1940.

Patients as young as 19 and as old as 72 years have been observed with this condition. Women have been affected four times as frequently as men in this series, and practically all the patients have previously had their tonsils removed, most of them many years before the occurrence of the condition under discussion. Just what bearing this finding may have, I am unable to say, but it may present some interesting speculation if further observations support it.

ANATOMICAL CONSIDERATIONS

The hyoid bone consists of a body, two lesser and greater horns. The posterior surface of the body is smooth and concave. It is separated by some fat and a bursa from the medium thyrohyoid ligament of the thyrohyoid membrane, which in turn is separated by a pad of fat from the stem of the epiglottis. When the larynx is pulled up during swallowing, the posterior surface of the hyoid bone overlaps the thyroid cartilage of the larynx and the bursa lessens the friction between them. This synovial bursa is quite variable in extent, having extensions into the thyrohyoid membrane. The superior border of the body of the hyoid gives attachment to the thyrohyoid membrane, part of the geniohyoglossi and the chondroglossi muscles. The greater cornu gives attachment to the lateral thyrohyoid ligament, hyoglossus, and middle constrictor of the pharynx. The greater horns are the limbs of the U. They spring from the body about a finger's breadth from the median plane and extend backward in the sides of the throat. They can be grasped between the finger and thumb by the tip or tubercle of the greater horn, which, though often referred to as a landmark, is overlapped by the anterior edge of the sternomastoid muscle and cannot always be felt easily. The lesser cornua are connected to the body of the bone by a distinct diarthrodial joint which usually persists throughout life but occasionally becomes ankylosed. Their apices give attachment to the styloid ligament.

As to the etiology, it is probably most often the result of infection in the nose, throat, or teeth, although I see no reason why the causes would not be the same as for that of bursa in other parts of the body. In one case seen, a subdeltoid bursitis was present at the same time as the bursitis of the hyoid.

The symptoms of hyoid bursitis include a sore throat, particularly on swallowing or talking; in fact, movements involving the hyoid bone are painful. The pain is often referred to the ear, base of the tongue, teeth or the side of the face. The pain is relieved by rest and may be absent in the morning and become more pronounced in the afternoon and evening. Some patients complain of discomfort when protruding the tongue. Speaking may become painful. The disturbance may be present for a few days to several months and even years, varying in severity.

There are two types. The acute type is associated with acute inflammations of the pharynx and nasopharynx, in which cases there may be general symptoms such as accompany acute inflammatory conditions, namely, fever, aching and malaise, in addition to the very acute difficulty in swallowing and talking that is out of proportion to what would be expected from the inflammation within the throat. Hyoid bursitis may add greatly to the postoperative discomfort following some tonsillectomies.

The subacute or chronic type persists for weeks or months after the subsidence of the original infection. Many patients have been treated for weeks with local swabbing and gargles without very much benefit. One patient "hit" on the diagnosis when she stated that she thought she must have rheumatism of the throat, since the pains suggested a similarity to the pain she had been suffering within the shoulder. Some patients give a very indefinite type of history as to the origin; evidently the development of the bursitis has been so gradual that they do not connect the original infection with this later change. Judging by the quick response that hyoid bursitis gives to therapy, it suggests that it is not a true infection in the bursa but rather a toxic irritation of the synovial covering.

Objectively, hyoid bursitis can be readily detected by gently grasping the greater horns of the hyoid bone between the thumb and forefinger. The side affected is quite sensitive to pressure, so much so, that the patient will usually flinch. I have never observed a case of bilateral tenderness but can see no reason why it should not be present at times. The sensitiveness to pressure over the greater horn may be so pronounced that a myositis or circumscribed periostitis might be suspected were it not for the fact that the therapeutic response is too prompt for either of these conditions.

Diagnosis.—The diagnosis of hyoid bursitis is made from the symptoms and the elicitation of a distinct area of tenderness at the tubercle of the greater cornua of the hyoid bone on the affected side. The pressure applied at this point changes the tension on the thyrohyoid membrane in its relation to the inflamed bursa. This same tenderness may also be elicited by pressure along the lateral thyrohyoid ligament, although to a lesser degree than over the tip of the bone. As a differential diagnosis we must consider

myositis, periostitis, or perichondritis in which case the x-ray would be of value. However, the prompt therapeutic response of bursitis would eliminate those as possibilities.

Treatment.—Promptly after recognition of the condition comparatively small doses of salicylates are given over a period of a few days to a week. I have had only one case that failed to respond completely to salicylate therapy; that case improved but did not clear up until a sphenoid infection was relieved. Sodium salicylate in doses of five grains, every three hours, for two or three days will in most cases cause the disappearance of the sensitiveness to pressure and pain on movement of the hyoid bone. The continuance of sodium salicylate in doses of five grains three times daily for a week usually means complete relief.

CASE REPORT

A woman, aged 58, had had the tonsils removed five years before. Following a gastro-intestinal upset during the summer of 1936, she developed a painful throat. She was treated for about two months without much relief. Later, she was told that there was no redness in the throat and that the pain was due to the scar tissue from the tonsil operation. This patient came about 500 miles to see me because I had removed her tonsils. Examination of the nose, including the sinuses, was entirely negative. There was no inflammation in the throat and there was no apparent contraction in the tonsillar fossa. The patient did complain of pain when the tongue was depressed near the left base. The lower pharynx and larynx were clear of inflammation. In manipulating the hyoid bone there was a very definite tenderness elicited over the tip of the greater horn on the left. This patient was given Salicionyl, drams one, every three hours, and in forty-eight hours the pain had entirely disappeared. She was kept on the salicylate therapy for one week and has not had a recurrence.

Case 2.—A woman, aged 30, had a sore throat early in December and was told it was a streptococcic infection, which responded to treatment. About two weeks later she again developed sore throat which seemed quite different in that the pain was localized to the right side of the throat but was neither inside or outside, as she expressed it; it seemed in between. The pain was absent in the morning and became severe in the late evening, especially after talking. This pain continued with varying severity until March, when I first saw her. Treatment had consisted of gargles and various local applications without much relief. Examination of the nose showed a mild infection of the posterior ethmoids. Of the throat the tonsil fossa were clear; there was mild redness of the pharynx along the lateral wall, the larynx was essentially negative. The neck was free of glandular involvement but showed a very definite tenderness over the greater cornu of the hyoid bone on the right which intensified the pain of which the patient complained. After five days of sodium salicylate therapy, five grains every three hours, the pain disappeared as well as the tenderness over the hyoid.

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4105 Live Oak St.

ABSTRACT OF DISCUSSION

Dr. Tom Barr, Dallas: The group of symptoms and physical findings that Dr. Nelson has described for us is a new clinical diagnosis, as far as I have been able to find in the literature. He called my attention to this work over a year ago and since that time I have seen three cases which I have had the opportunity to follow and feel sure they responded to external heat and salicionyl by mouth.

In the differential diagnosis I think we have to rule out a lymphatic involvement in the medial group of upper deep cervical glands which lie on the superficial surface of the internal jugular vein in the carotid triangle of the neck. The lowest gland of the group lies on the lateral surface of the internal jugular vein immediately above the omohyoid muscle. This group of glands receives lmyph from the nose, mouth, tongue, the upper parts of larynx, pharynx, tonsil, the upper part of thyroid gland, the submaxillary, sublingual, and parotid salivary glands and from the interior of the cranium.

I think these glands are involved many times when they cannot be palpated since they are so deeply placed.

I have enjoyed this excellent paper and think Dr. Nelson deserves credit for bringing us something new.

Dr. C. P. Schenck, Fort Worth: When one starts from scratch he cannot speak with much intelligence on a subject like this; and I feel about as ignorant as the dog's hind leg, which was directed only by instinct to dislodge the flea behind his ear. In other words, my efforts to become informed have only scratched the surface.

There is a remarkable paucity of material in textbooks and current literature on this subject. Gray's Anatomy casually refers to this synovial bursa in one sentence, given chiefly to a description of the thyrohyoid membrane. Cunningham disposes of it in perhaps six lines. A painless subhyoid cyst called Boyer's cyst is mentioned in Gray's Anatomy and also in Nelson's Loose Leaf Surgery.

A comprehensive search of the Quarterly Cumulative Index Medicus back to 1920 reveals the reference noted by Dr. Nelson, two on anomalies of the hyoid, and one on "Cysts of Bursa Mucosa of Subhyoid Region." These were all in foreign publications, not available through the libraries of either the State Medical Association or the American College of Surgeons.

The dictionary describes a bursa as "A sac or sac-like cavity filled with a viscid fluid and situated at places in the tissues at which friction would otherwise develop." If the suffix "itis" may be affixed to any anatomical structure to indicate inflammation of that part, it should be proper to use the term hyoid bursitis.

However, it occurs to me that the term "rheumatoid disease," used by Goldstern, is sufficiently comprehensive to include all the symptoms mentioned by the essayist, although I think the term "rheumatoid condition" would be better. There are so many muscles, ligaments, and articulations in this hyoid region that to limit the responsibility to inflammation of the hyoid bursa is in a sense begging the question. Until a histopathological report of inflammatory changes found in this bursa is available, I would be inclined to question the propriety of accepting this as a distinct clinical entity.

That Dr. Nelson and Goldstern should be the only two laryngologists to write on this condition means either that these two are unusually keen observers, or the rest of us are very unobservant. While I seem to differ with Dr. Nelson as to whether this is a distinct clinical entity, I admire his fortitude in venturing into such an uncharted sea. I hope that, like those

of Columbus, his discoveries and conclusions may be confirmed, and not be challenged as are the North Pole claims of Dr. Cook. If substantiated, Dr. Nelson's name should be memorialized like Addison's, Bright's, and a host of others, by naming this condition "Nelson's disease."

THE ENDOCRINE FACTOR IN DYSFUNCTION OF THE ORGANS OF SPECIAL SENSE*

HAROLD L. WARWICK, M. D.
FORT WORTH, TEXAS

The recognition of the value, or importance, of the estrogenic hormones in physiology and pathology has been the results of most modern research, but glandular therapy dates back to ancient times when primitive man believed that a diseased organ could be cured by eating its healthy counterpart. Many years passed before an understanding of the fundamental basis of this therapy was discovered. It has long been said "a woman is a woman only as her ovaries function" but not until about forty years ago when transplantation of ovaries of animals was done experimentally, was uterine atrophy avoided. Then followed active ovarian extracts and rapid progress made by such men as D'Oisy, Zondeck, and other pioneers in this field.

The ductless glands are still an enigma, to a great extent, but it has been conceded that the master gland is the pituitary, including the anterior, posterior and middle lobes. Comparing the whole group with an orchestra, we might say that the pituitary, ovaries, thyroid and adrenals play the first violins but where do the lesser parts of the orchestra—such as the breasts, uterus, prostate, testicles, and pancreas come in for their cues? Surely they have their parts or else the ensemble would not have the hormonic balance that makes for harmony complete. It is difficult to conceive that this orchestra could function so perfectly unless there was still another higher force, be it the vegetative nervous system, the central nervous system, or perhaps a gland as yet unknown.

Some may say that, due to the limitations of my practice, I should not delve into this intriguing field of endocrinology; but no specialty becomes so highly "specialized" that it can be completely divorced from the rest of the body. It is all securely fastened together, and each part depends upon the other for coöperation and sustenance. In my practice, in the affairs concerning the organs of special sense—the dysfunction of the ears and loss of hearing; the dysfunction of the eyes with muscular imbalance, calcium deficiency and cataract; the dysfunction of the nose, rhinitis, both hyperesthetic and vasomotor—nearly all are associated and largely in the female coincident with some ovarian or pituitary dysfunction, as we now understand it. I say "female" but possibly "genus homo" would be far more fitting. Dr. Emil Novak[1] has very understandingly shown us how in the beginning of life, the male and female chromosomes are so closely related that it seems just a matter of chance that the male or female cells predominate and later determine the sex. Sometimes later in life, a new activity takes place and a female may be transmuted, or become dominated by the male, as in arrhenoblastoma.

With these possibilities in mind, it requires no great stretch of the imagination to associate a glandular hypo- or hyperfunction with an associated dysfunction of the organs of special sense. We are now satisfied that otosclerosis may follow pregnancy in a woman who, by birth, has a calcium deficiency. In the unmarried woman this condition can be brought about by hypo-ovarianism such as follows ovarian cysts and tumors in early life, or artificial menopause. It is now my belief, and I hope to show, that strabismus, squint, or "crossed eyes" is due to much the same malfunctions as otosclerosis.

The biologist and the pathologist assure us that the calcium-phosphorus balance must be maintained if we are to have normally functioning organs, and failure to acquire, or to maintain, this balance results in a deficient bone, cartilage, muscle, or tendon. But with this hypothesis before us, it is within the bounds of reason to think that a child with a marked squint and a history of chemical malnutrition must have an associated cause-factor. In the majority of such cases a history of the mother will reveal that she was bottle-fed or, if breast-fed, was poorly nourished from a chemical viewpoint. We know, then, that her baby's calcium content was borrowed material and that when the mother's calcium-producing glands did become active it was too late to supply the baby's deficiency. This condition starts the baby in life with a calcium insufficiency and makes the mother a probable candidate for otosclerosis.

Over a period of several years I have been regarded as mediumistic by mothers who have brought their children to me for examinations. I look into the child's mouth and announce that he was a bottle-fed baby. The mother exclaims, "How did you know?" A child with a calcium deficiency will not only have poor dentition, but if the tonsils and

*Chairman's address delivered before the Section on Eye, Ear, Nose and Throat, State Medical Association of Texas, Dallas, May 14, 1940.

1. Novak, Emil: Sex Determination, Sex Differentiation and Intersexuality, with Report of Unusual Case, J. A. M. A. 105:413-420 (Aug. 10) 1934.

adenoids have been removed, the fossæ will be filled with a lymphoid tissue and the postnasal space with new adenoid tissue. The baby will, in most cases be wearing dental braces to align the teeth and the eye muscles will be out of balance. This latter condition may not be noticeable to the casual observer, but the phoroptor is a keener observer than the unaided eye. I have been able to remove the lymphoid and adenoid tissue in some of my small patients by giving them calcium and ultraviolet light and, at the same time, this improved the balance of the extraocular muscles.

While I am not unmindful of the evaluation that has been placed upon the synergistic relations of the orthodox practices of my colleagues—some of whom probably will regard the foregoing as rank heresy—I have proved to my own satisfaction that indiscriminate surgery of the extra ocular muscles or employing of prisms of high power, or even the use of orthoptic training, without complete investigation of the chemical and endocrine status is without value and proves worthless as a corrective measure for the patient. The delay caused by years of time used with these procedures should be avoided; this time is too valuable to throw away in such manner and might better be employed in improving the balance of the endocrine system, thereby permanently assisting the correction of the muscular imbalance while the whole body growth and functions become more normal. The day is past when only crutches would be supplied to a rachitic child.

I shall not discuss the anatomy of the vicinity of the hypophysis and its relationship to the cranial nerves that have to do with the extra ocular muscles, but I should like to refer to a difference of the opposite character which I feel is only due to chemical difference, both in the sclera and the tendons of the muscles of the eye. To this difference and its occurrence in young children other evidences of chemical poverty may be noted, such as poor dentition, squint, tetany, thymus hyperplasia, chorea and its entire train of symptoms. With the correction of chemical poverty by proper diet and such pluriglandular therapy as indicated, improvement begins at once. There are definite outstanding characteristics, even in the very young, that scream deficiency; for instance, it is a well known fact that the thin sclera which occurs in some children wherein the choroid shows through to such an extent that the sclera appears blue, is usually associated with abnormal fragility of bones. One readily recognizes these symptoms and, in the years to come, children will be typed and otosclerosis, squint, and dental troubles will be lessened to a marked extent.

Without going into detailed case histories, I wish to sum up twenty cases that I have observed, all in females, of about the same age and nearly all of them married. They gave histories of the same type of menstrual dysfunction (hypoövarian) and, in most of the cases, their gynecologists had substantiated the diagnosis. Their extra ocular muscles gave essentially the same imbalance; in the majority of them the muscles involved were the internal recti, which insufficiency was probably due to inhibition of the third nerve, thus permitting the external rectus to turn the eye out.

I have observed, in these young women, that their muscular difference varied from time to time, the greatest divergence being just prior to their menstruation, gradually decreasing to a minimum (but never quite normal) half-way between periods, only to repeat the performance in the next cycle. Marked improvement was noted in these patients following the administration of certain estrogenic hormones designed to balance the interactivity between the ovaries and the pituitary and the thyroid and parathyroids. By decreasing the pituitary hyperplasia a series of responses is set into motion which relieves the eyes of the coincident symptoms.

From observation of senile cataracts and the results obtained from the use of glandular and vitamin therapy, I am led to believe that the time is near when the rapid advancement of these cataracts may be prevented and those in the incipient stage cleared up and vision restored to near normal. Several years ago my attention was called to changes that occurred in senile cataracts associated with a fracture of major bones. The clearing of the lenses in these cases indicates to my mind that in the latter stages of life the insufficiency of calcium, or the inactivity of the calcium-producing glands—such as the thyroid and parathyroids—would not provide sufficient new calcium; therefore, the withdrawal of calcium from other parts of the body, including the lenses, if necessary, to effect the repair of the major fracture. We know now that this calcium was deposited in the lens probably due to a source of infection somewhere in the vicinity of the eye, such as the teeth, tonsils, and sinuses, but most frequently carious teeth. My attention has been forcibly drawn to the fact that cataracts are invariably associated with a septic mouth. We may assume that after the epiphyses are united there is a marked decrease in the activities of the calcium-producing glands with only sufficient calcium being provided to maintain the necessary bal-

ance. The individual becomes chemically impoverished; the teeth become carious; the repair plant of the body begins a frantic endeavor to rebuild and the result is calcium with no place to put it and cataract is the end result.

One can now visualize the future treatment of squint, otosclerosis, muscular imbalance, and cataract as a routine of diet, vitamins and endocrine therapy.

608 Mid-Continent Building.

ACTIVITIES OF THE BUREAU OF FOOD AND DRUGS OF THE TEXAS STATE DEPARTMENT OF HEALTH*

F. D. BROCK
(Director Bureau of Food and Drugs, Texas State Health Department)
AUSTIN, TEXAS

The food and drug law is primarily a measure for the protection of the consuming public against fraud and deceit and ignorance. Undoubtedly those who framed the measure and who worked so earnestly and successfully for its enactment and who were finally rewarded by seeing its passage by the Legislature, also had in mind the necessity for protecting the public health. This important feature of food and drug control work is most generally recognized and appreciated. The economic features of the Act, however, are not so generally known. By far the greater part of the statutory definitions of adulteration, as well as practically all of those relating to misbranding, were designed to cover those types of abuses in the food and drug industries which result in a cheat to the consumer rather than a direct attack upon his health. Indirectly, nevertheless, it is obvious that any adulteration which results in the impairment of the quality of food has likewise a marked effect upon health. Enforcement has shown that the law, as at present framed, is practical in its application. Attempts to weaken it by legislation, giving special privileges to certain classes of food products or limiting the authority of the Department of Health to institute appropriate measures, will be detrimental to the interests of the consumer, and by the same token to that great proportion of the industry doing a legitimate business and which is entitled to the protection against unfair competition that the law so definitely provides. It must not be forgotten that bureaucratic exercise of the authority granted by the law can readily be corrected through the intervention of the courts to whom all questions must be referred for decision.

A review of some of the outstanding features of thirty years of food and drug law enforcement would reveal that one of the most important has been the gradual change in the attitude of the food and drug manufacturing industries themselves from one of distrust and enmity in the early days to a present attitude of appreciation, cordial cooperation and enthusiastic assistance. The food and drug inspector today is not looked upon in most quarters as a detective or policeman, but as a technician who can and will assist a manufacturer by timely suggestions to produce a legal and, therefore, a more marketable and more profitable product.

During the thirty years since the law became effective, more than 20,000 cases of violations of the Act have been terminated in the courts. Not included in this total are thousands of cases involving several million pounds of foods and drugs which have been detained for correction of some form of violation or have actually been voluntarily destroyed by the owners. The State Health Department, however, in enforcing the law proceeds upon the theory that more is to be accomplished by demonstrating how the law can be complied with than by attempting to bring the greatest possible number of prosecutions. Nowhere in State Government will be found a more tolerant attitude toward violations than in the State Department of Health. Where serious violations, whether deliberate or the outcome of gross carelessness, occur, no justification for refraining from instituting punitive measures exists. There are, however, a vast number of minor violations, the result of ignorance or accident, which can be readily corrected with even greater promptness than by court action. This is accomplished by calling the attention of the manufacturer to the situation and requesting his coöperation in bringing about a discontinuance of the objectionable practice. As the attitude of the industry toward the law has changed, the State Health Department has more and more adopted the practice of correcting less serious infractions of the law by such educational measures. It is obvious that should the Department confine its law enforcement efforts solely to the development of prosecutions, its accomplishments would be greatly restricted and its energies would be exhausted in the collection of evidence. One principle of fair enforcement is that action against the product of any industry must be uniform throughout the State. This principle is a guiding one in the Department's plan of operation. Its inspectors, throughout the State, are fully informed regarding food and drug distribution in their respective territories, and

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where abuses are discovered, efforts are made to proceed against them simultaneously throughout the State and to apply a uniform method of correction.

Food and drug control through regulatory measure is most important to public health accomplishments when considered from the preventive angle. The decrease in food-borne disease outbreaks has been due in a great measure to this fact. It is considered that regulatory measures have contributed as much toward the decrease of food-borne outbreaks as have refrigeration and improved manufacturing methods. Milk-borne epidemics have practically disappeared and seldom do we even hear of outbreaks due to canned goods or other foods processed for preservation.

In the enforcement of any law some individual must assume the responsibility of determining administratively what action shall be taken. Law enforcing agents are human and fallible. However, back of the enforcement policies of today is ample precedent. It usually will be found that any course of action taken under the law, even though based on such long experience, will be obnoxious to a number who suffer as a result of such action, but these are almost invariably in the minority. Entrusted as it is with the enforcement of the law, the Department of Health, regardless of differences of opinion, can never surrender its duty of determining what action shall be taken in circumstances involving apparent violations.

The Bureau of Food and Drugs, then, with the full approval and support of the State Health Officer and the Board of Health, proceeds upon the theory that, considering the personnel and funds available, the most effective enforcement of the food and drug law and, therefore, the most far-reaching protection of the public and of legitimate industry, is to be obtained upon the following basic principles:

(1) By the adoption of an advisory-before-the-act attitude, showing the industries in advance how they may conform with the law;

(2) By the issuance of notifications in the case of minor infractions, directing attention to the need for correction as a means of avoiding prosecution or seizure; and

(3) By the imposition of penalties provided by law through formal court action in all serious violations.

The Bureau has, of course, a serious administrative responsibility in determining what types of infraction should be proceeded against in court and what may be corrected by less formal means. The employment of instructive methods in minor infractions is less expensive to the State, creates less disturbance in trade circles, and effects a very much greater protection with the same amount of effort than does an enforcement method based solely upon the institution of court action. That the Bureau's theory of enforcement does produce practical results is commendatory of the honesty and good intent of manufacturers of food and drug products, as well as a tribute to the high type of inspectors representing the Department.

The Bureau has, for many years, operated under a dual program embracing at the same time both regulatory and informative methods in the belief that one is essential to the other. Experience has afforded ample justification for the adoption of this policy and no thought of abandonment or dissolution of it should be entertained. Any proposal of enlargement of the activities of the Bureau or the adoption of new laws to be enforced by it should be considered only in regard to this well-founded policy. The Bureau is and should always be a source of authentic information to the manufacturer and distributor, as well as to the general public, while at the same time it should not be fettered in the prosecution of willful violators.

To afford a more perfect understanding of the violations encountered in routine inspection of food and food establishments, it is well to enumerate a few.

VIOLATIONS OF THE FOOD AND DRUG LAW

1. *Food products containing added poisonous or other added deleterious ingredients which may be harmful to health.*—This group of violations has practically disappeared due to improved manufacturing processes in which poisonous substances are not used as was formerly the case. Suffice it to mention that at one time formaldehyde, bichloride of mercury, alcohol, salts of sulphuric acid, and so forth, were used as food preservatives. These, as will be recognized, are all poisonous. Hydrocyanic acid gas is employed to some extent in food factories and warehouses for fumigation purposes. This gives us grave concern at times due to some foods absorbing the gas, rendering such food dangerous to life.

2. *Food products consisting in whole or in part of filthy, decomposed or putrid animal or vegetable substances.*—This is by far the most important group of violations encountered—important from the standpoint of the number of violations and from the standpoint of their effect upon public health. Several factors enter into this form of food adulteration, the most common of which may

be classified as follows: (a) Condition of raw material. Good food cannot be made from rotten sources. (b) Protection of materials and finished products. Some manufacturers are prone to treat food as a commodity and not as a food. They attempt to strain out insects and other filth instead of keeping it out in the first place. Many cases of deliberate contamination of food are on record. This may be questioned since it is difficult to imagine a manufacturer knowingly placing on the market a filthy food. In this connection it should be remembered it is cheaper to be filthy than to be clean. Labor and equipment for cleaning factories and stores costs money and we find that this saving is effected in many otherwise pretentious factories, and more would discard the practice if an inspector did not put in an appearance ever so often. (c) Most foods are prone to deteriorate or become contaminated through mishandling or decay, or to putrify for the lack of refrigeration. In many instances dealers are not willing to suffer loss through their own carelessness and attempt to disguise and place on the market foods which are dangerous to health through decomposition. A notable example of this is found in the use of sulphites to preserve, deodorize and restore color to decomposed meat.

3. *Food or drug products so grossly adulterated or misbranded that their distribution constitutes a serious imposition upon the public.*—In this group of violations we find that a great deal of fraud is perpetrated upon the public through deliberate misbranding. There is hardly any manufactured food which cannot be imitated. We find cheap imitations of such well-known products as tomato catsup, peanut butter, flavoring extracts, jellies, and many others.

By the application of the law in each of the three types of violations listed, it is found that satisfactory protection of the public food supply may be had.

Food receives most of our attention from the standpoint of the number of hours and days spent in inspection work, but in my opinion the most important work is done in reference to drugs and their distribution. Drugs are more likely to be dangerous in their general distribution than foods.

Between food and drugs there are two important differences. First, we have the Pharmacopoeia as a legal adjunct of the law in setting out standards and definitions as a guide in dealing with drugs, while there are no such lawful standards for foods. Second, there is also another important difference from an administrative standpoint, in that drugs are usually dispensed by persons highly trained in the art of compounding, while food is more often dispensed by persons without special training.

A brief resume of the Bureau's activities for the past year in relation to drugs and their distribution includes fifteen convictions of medicine show operators, the conviction of twelve medicine peddlers, including one "Radium" stone vendor, the destruction of 4540 items of old, misbranded and adulterated drugs, the conviction of one itinerant physician on four separate counts, and twenty-one miscellaneous convictions in connection with the sale and manufacture of drugs. This account does not include 600 convictions obtained in cases involving violation of other provisions of the food and drug law and general health laws.

These achievements are truly astounding when considered in the light of the fact that this Bureau is charged with the responsibility of inspecting at regular intervals every food and drug manufacturing plant in this state for the purpose of "inquiring into the quality of the food and drug products manufactured or sold or exposed for sale in this state" and to "make complaint and institute proceedings against any manufacturer or person who violates any provision of the food and drug law of this state."

The term "every food manufacturing plant" includes 173 meat packing plants, 484 milk products plants, exclusive of dairies, and 102 canning plants of record in Texas which come under our jurisdiction and receive a great deal of attention. Besides all of these there are more than 5,000 other food manufacturing establishments, great and small, that demand our time and effort toward keeping them in the righteous path on sanitation and in compliance to health laws.

I wish to digress at this point to call attention to the magnitude of the food industry as a whole. For this, I quote from a paper presented by Clarence Francis, president of the General Foods Corporation, to the New York Stock Exchange Institute, on November 18, 1938. Mr. Francis said:

"Food is one of the few items that can claim for its market the entire population, and food takes the largest slice of our income . . . A hen seen scratching in the front yard of a pig-iron furnace in blast, appears insignificant. Yet the annual value of chickens and their eggs is more than two and a half times as great as the yearly wholesale value of our pig-iron output . . . The food industry, in all of its phases, from production through processing and distribution, gives employment, whole or part-time, directly and indirectly, to more than a third of our population . . . The food industry is the biggest industrial motor-truck buyer in the United States. It furnishes the railroads with more than a fifth of their freight traffic . . . Our national economy also is profoundly affected by the distribution of foods.

Approximately 25 per cent of every dollar spent in retail stores of this country goes for food. One out of every three retail stores handles food. One out of every six people in retailing is at work in food stores."

Government statistics bear out all that Mr. Francis said in his paper.

It is believed that no one will question the fact that the Bureau has a great responsibility and an important duty to perform, but just how thorough and how extensive this work is being done may be a matter of conjecture. In dispelling doubt the only barometer we can use is voluntary expression directly from those affected. We are able to offer documentary proof of the influence of the service throughout the state, which in our estimation is highly complimentary. I need to cite but one or two of the many instances to which I refer. The canners of the Rio Grande Valley received the attention of one of our inspectors for two years. During that time no Federal seizures of their products were consummated and only a few disciplinary actions were taken by the State. The results are that the canners saved money and the public regained confidence in their products.

Another instance is one concerning the meat packers. There are too many details to be brought out here, but it suffices to point out that through the passage and enforcement of a ruling limiting the amount of moisture and cereal content and excluding soybean as a substitute for meat in comminuted meat and meat products, the industry was able to reclaim public confidence toward these products.

In the furtherance of this program the limited scope of the food and drug law was augmented by invoking certain provisions of the Medical Practice Act, the Occupation Tax Law, and other laws. One may receive the impression that these convictions currently reported are the result of an influx into Texas of violators from other states as a result of more stringent enforcement of new laws in those states, but such is only in part true. Quacks and nostrum peddlers have, according to records, "made" Texas for the past several years in spite of our laws. It is agreed that our laws are not what they should be but by splicing them out with parts of other laws and judiciously using the facilities at our command some deterring influences are being thrown against malefactors.

In order to cope with the complex order of things it has been necessary to enlist the aid of other departments and invoke laws unrelated to food and drugs. This naturally gives rise to questions concerning the present status of the food and drug law. A law written thirty-three years ago to apply to industries dedicated to progress and ever-changing methods of operation could not be expected to be adequate in every detail today. I need but mention two or three places wherein the old law does not apply. It does not mention medical devices or cosmetics and it does not require informative labeling for drugs or foods. These features and many more are found in all modern legislation. The present law is more or less an ambiguous document depending solely upon penalties to prohibit abuses, while modern laws on the subject depend upon the field of research to the end that manufacturers and consumers alike are given a means of meeting on a common plane in the interest of honesty and fair dealing. Under such an arrangement the regulatory official contributes scientific and legal data, and policing is reduced to a minimum.

It is not so easy to answer the many questions covering new laws. So many things are to be considered. In the first place, with new legislation added responsibilities must be assumed by its administrators. As the matter now stands, the Bureau of Food and Drugs is burdened with more responsibility than it can properly carry. The adoption of a new law is not a simple matter of shifting from the old to the new, but a readjustment, requiring time, must take place within several of our largest industries, not to speak of the industries brought under the jurisdiction of the law for the first time. The Department must of necessity firmly hold a central position around which all of this swirl of activity must rotate.

To amend the law would only serve to continue many adverse decisions which have greatly hampered operations in the past and continue in force such loop-holes as the "distinctive name" clause, and most of the ambiguities of the old law. New legislation carries with its passage a demand for additional operating funds.

In this connection, let us glance at some appropriation figures of other states. Wyoming heads the list by appropriating 17.25 cents per capita for this purpose; New York State appropriated 12.75 mills, while Texas appropriated 4.6 mills. The average for thirty states is placed at slightly more than 3 cents per capita, or seven times that of Texas. The cost of enforcement in Texas cannot be considered a burden when the service is rendered to 1,000 people for $4.60 and almost 12 per cent of that is collected from manufacturers as registration fees.

I cannot speak for the various industries in our state, but from voluntary expressions from individual manufacturers I have

formed an opinion that they would be willing to share the financial burden of a new law, as is done in a few other states, if proper enforcement without political interference could be assured. In a spirit of fair play let me state here that the public at large is much less concerned as to the proper enforcement of the food and drug laws than are the industries.

In this discussion references have been made to several factors pertaining to the effective enforcement of the food and drug law, but to terminate the discussion without calling attention to certain other factors would indeed be unfair to that army of health officers and their staffs throughout the state who have so diligently assisted in the enforcement of the law and in the dissemination of information to the public. Without their able assistance and their intelligent counsel the way would have been much harder and the success of our undertakings doubtful. Health officers have been relied upon for assistance in almost every instance where the public health was in any manner involved.

MISCELLANEOUS

COMING MEETINGS AND CLINICS

State Medical Association of Texas, Fort Worth, May 12-15, 1941. Dr. Preston Hunt, Texarkana, President; Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth, Secretary.

American Medical Association, Cleveland, June 2-6, 1941. Dr. Nathan B. Van Etten, New York, President; Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Southern Medical Association, Louisville, Kentucky, November 12-15, 1940. Dr. Arthur T. McCormack, Louisville, Kentucky, President; C. P. Loranz, Empire Building, Birmingham, Alabama, Secretary-Manager.

Texas Allergy Association, Fort Worth, May 12, 1941. Dr. Boen Swinny, Medical Arts Building, San Antonio, President; Dr. Homer Prince, Medical Arts Building, Houston, Secretary.

Texas Ophthalmological and Otolaryngological Society, Fort Worth, December, 1940. Dr. J. W. Ward, Greenville, President; Dr. Dan Brannin, Medical Arts Building, Dallas, Secretary.

Texas Radiological Society, Sherman, January 18, 1941. Dr. Jerome H. Smith, San Angelo, President; Dr. L. W. Baird, Temple, Secretary.

Texas Club of Internists, Boston, October 20-26, 1940. Dr. Carl Lovelace, Waco, President; Dr. George Herrmann, Medical College, Galveston, Secretary.

Texas Association of Obstetricians and Gynecologists, Marlin, Oct. 5, 1940. Dr. H. Reid Robinson, Galveston, President; Dr. Julius McIver, 1314 Medical Arts Building, Dallas, Secretary.

Texas Pediatric Society, Galveston, Oct. 5, 1940. Dr. T. A. Tumbleson, Beaumont, President; Dr. Frank Lancaster, 4409 Fannin Street, Houston, Secretary.

Texas Neurological Society, Austin, Nov. 4, 1940. Dr. Wilmer Allison, Fort Worth, President; Dr. Melbourne J. Cooper, Nix Professional Building, San Antonio, Secretary.

Texas Railway and Traumatic Surgical Association, Fort Worth, May 12, 1941. Dr. G. V. Brindley, Temple, President; Dr. Ross Trigg, First National Bank Building, Fort Worth, Secretary.

Texas State Pathological Society, Dallas, Jan. 26, 1941. Dr. Geo. T. Caldwell, Dallas, President; Dr. M. D. Bell, 1109 Medical Arts Building, Dallas, Secretary.

Texas State Heart Association, Fort Worth, May 12, 1941. Dr. Joseph Kopecky, San Antonio, President; Dr. V. E. Schulze, San Angelo, Secretary.

Texas Dermatological Society, Dallas, Oct. 13, 1940. Dr. W. A. Smith, Beaumont, President; Dr. Duncan O. Poth, 1230 Nix Professional Building, San Antonio, Secretary.

Texas Surgical Society, Temple, April 7 and 8, 1941. Dr. W. L. Crosthwait, Waco, President; Dr. Walter Stuck, 1426 Nix Professional Building, San Antonio, Secretary.

Texas Orthopedic Society, Fort Worth, May 12, 1941. Dr. W. B. Carrell, Dallas, President; Dr. Ruth Jackson, Medical Arts Building, Dallas, Secretary.

Texas Association of Medical Anesthetists, Fort Worth, May 12, 1941. Dr. Thomas H. Compere, Houston, President; Dr. R. A. Miller, 1415 Nix Professional Building, San Antonio, Secretary.

Texas Society of Gastro-enterologists and Proctologists, Fort Worth, May 12, 1941. Dr. M. O. Rouse, Dallas, President; Dr. Tom E. Smith, 1207 Medical Arts Building, Dallas, Secretary.

Texas Mental Hygiene Association, San Antonio, February, 1941. Dr. Paul White, Austin, President; Dr. Evelyn M. Carrington, Huntsville, Secretary.

Texas Tuberculosis Association, San Antonio, May 5-8, 1941. Dr. E. G. Faber, Tyler, President; J. W. Butler, Galveston, Secretary.

Texas Public Health Association, Fort Worth, Oct. 7-9, 1940. Dr. J. W. E. H. Beck, De Kalb, President; Mr. P. A. Kerby, State Department of Health, Austin, Secretary.

Second District Medical Society, Abilene, Nov. 1 and 2. Dr. W. V. Ramsey, Abilene, President; Dr. W. T. Sadler, Merkel, Secretary.

Third, Panhandle, District Medical Society, Lubbock, Oct. 8-9, 1940. Dr. F. A. White, Childress, President; Dr. H. H. Latson, 301 Polk St., Amarillo, Secretary.

Fourth District Medical Society, Ballinger, Oct. 17, 1940. Dr. J. P. Anderson, Brady, President; Dr. O. H. Chandler, Ballinger, Secretary.

Fifth and Sixth, Southwest District Society, Laredo, 1941. Dr. T. E. Christian, San Antonio, President; Dr. W. W. Bondurant, Jr., 1512 Nix Professional Building, San Antonio, Secretary.

Seventh, Austin District. Dr. Joe A. Shepperd, Burnet, President; Dr. A. L. Nanny, Marble Falls, Secretary.

Eighth, Ninth and Tenth District Medical Society, Houston, 1940. Dr. Walter D. Brown, Beaumont, President; Dr. A. A. Ledbetter, Medical Arts Building, Houston, Secretary.

Eleventh District Society, Palestine, Oct. 17, 1940. Dr. Clayton Shirley, Tyler, President; Dr. C. C. McDonald, Tyler, Secretary.

Twelfth, Central Texas District Society, Waco, Jan. 14, 1941. Dr. Dan Warren, Waco, President; Dr. R. K. Harlan, Temple, Secretary.

Thirteenth, Northwestern District Society, Bowie, March 11, 1941. Dr. J. Edward Johnson, Mineral Wells, President; Dr. Charles H. McCollum, Jr., 210 Mid-Continent Building, Fort Worth, Secretary.

Fourteenth District Society, Greenville, Dec., 1940. Dr. Ira L. Thomas, Gainesville, President; Dr. R. S. Usry, 1835 Garrett, Dallas, Secretary.

Fifteenth, Northeast District Society, Longview, 1941. Dr. Hugh M. Ragland, Gilmer, President; Dr. J. N. White, Texarkana, Secretary.

CLINICS

Post Graduate Medical Assembly of South Texas, Houston, December 3, 4, and 5, 1940. Dr. J. E. Clarke, Medical Arts Building, Houston, President; Dr. Cornelius Pugsley, 1801 Second National Bank Building, Houston, Secretary.

Dallas Southern Clinical Society Conference, Dallas, March 17-20, 1941. Dr. Everett C. Fox, Medical Arts Bldg., Dallas, President; Dr. C. H. Warren, 1133 Medical Arts Bldg., Dallas, Secretary.

Oklahoma City Clinical Conference, Oklahoma City, October 28-31, 1940.

JUNIOR MEDICAL OFFICERS SOUGHT FOR GOVERNMENT SERVICE

The U. S. Civil Service Commission has announced examinations to fill two classes of junior medical officer positions (rotating interneship and psychiatric resident) at St. Elizabeth's Hospital, Washington, D. C. The salary for the positions is $2,000 a year, less a retirement deduction of 3.5 per cent and a deduction of $60 a year for quarters, laundry, and medical attention.

For the rotating interneship position, applicants must be fourth-year students in a Class A medical school; however, they cannot enter on duty until they furnish a certificate showing completion of the medical course prior to June 30, 1941.

For the psychiatric resident position, applicants must have completed their fourth year of study in a Class A medical school subsequent to December 31, 1937, and must have the degree of B. M. or M. D. In addition, before entrance on duty they must have completed a 1 year rotating interneship.

Applicants will be rated on a written examination consisting of questions designed to measure applicants aptitude for learning and adjusting to professional duties in the service. They will also be rated on their education, experience, and fitness.

Applications must be filed with the Commission's Washington office not later than October 17, if received from States east of Colorado, and not later than October 21, 1940, if received from Colorado and States westward.

Further information regarding the examinations

is contained in the formal announcement. Announcements and application forms may be obtained from the Secretary of the Board of U. S. Civil Service Examiners at any first- or second-class post office, or from the U. S. Civil Service Commission, Washington, D. C.

GOVERNMENT TO NEED TEMPORARY AND PART-TIME CIVILIAN MEDICAL OFFICERS

The expansion of the army creates a need for about 600 civilian medical officers in various grades for temporary and part-time service. The duties of full-time officers will be to act as doctors of medicine in active practice in hospitals, in dispensaries, and in the field. The duty of part-time officers will be to report for sick call at a fixed hour each day and to be subject to emergency call at all times.

The Civil Service Commission in making this announcement calls particular attention to the fact that part-time officers will be able to continue their regular practice. In order that this may be done, appointments to the part-time positions will be made of medical officers in the vicinity of the place of duty.

Information concerning these positions may be obtained from the Secretary of the Board of U. S. Civil Service Examiners at any first-class or second-class post office, or from the United States Civil Service Commission, Washington, D. C. Physicians are urged to apply at once. This work is of the greatest importance to the success of the National Defense program.

REPORT ON HEALTH AND ACCIDENT INSURANCE FOR THE MEDICAL PROFESSION*

The House of Delegates of the State Medical Association of Texas on May 13, 1940, directed the Council on Medical Economics to investigate and report on health and accident insurance policies for the medical profession. It is obviously the wish of the House that the Council advise the component County Medical Societies or any member of the State Medical Association on the relative standing of insurance companies issuing such policies as may be submitted to the Council. The component County Medical Society has the decision whether or not its members desire health and accident insurance on a group basis. The doctor has the responsibility to select a policy which provides for his particular needs at a premium he is willing to pay.

The policies issued by various companies—and sometimes by the same company—rarely have exactly the same benefits and premiums. Consequently, the policies themselves cannot be rated either high or low on the basis of the relation of benefits to premiums. For a certain benefit may be so suitable to the requirements of one policy holder as to justify a high premium and at the same time not fit the needs of another even at a lower premium. But the policies can be classified as standard policies or group policies.

The attitude to claims have wide variations in different insurance companies. One company may place a liberal interpretation on the terms of its policy, another may resist all claims. This difference in attitude may be reflected in the premium. But it does not follow that a policy with a high premium will necessarily be liberally interpreted. While the policies cannot be rated, still the relation of benefits to premium and attitude of the company to claims are indicated in the ratio of loss and expense to premiums. The ratio of loss is the ratio of paying benefits and adjusting claims to premiums earned. The ratio of expense is the ratio of administrative and selling costs of doing business to premiums written. A ratio of loss greater than or equal to a ratio of expense, with a small profit to the insurance company, is favorable to the policy holder. But a loss ratio less than an expense ratio, with or without a profit to the insurance company, is not favorable to the policy holder. The incidence of disease and accidents is subject to considerable annual variations. But an insurance company's record of an expense ratio consistently greater than a loss ratio is a warning to prospective policy holders. The record of a company in paying benefits, adjusting claims, maintaining reserves and paying dividends, is quite important to a policy holder. But health and accident insurance policies vary so much from each other, that the doctor as a prospective policy holder can find no substitute for actually reading the policy and understanding its terms, particularly those printed in small type. The witticism that "the big print gives it to you and the small print takes it away" is no joke in some policies.

The Council on Medical Economics as a general proposition advises every member of the State Medical Association, whose income is solely dependent upon his own efforts, to carry a reputable insurance company's health and accident policy suitable to his requirements.

Published reports on Casualty and Surety Companies, Associations and Organizations, are accepted authority on rating insurance companies. Such reports form the basis of the Council's opinion. Life insurance companies writing health and accident insurance have our recommendation or not without a rating. The relative standing of a casualty insurance company is expressed in a general policy holders' and a financial rating. The general policy holders' rating has four grades: excellent, good, poor and no rating. The financial rating is based on net safety factors and has four grades: A, $5,000,000 or more; B, $1,000,000 to $5,000,000; C, $250,000 to $1,000,000; and D, $250,000 or less.

Insurance companies classify or rate policy holders with health and accident insurance according to occupation and age groups. The standard age groups are approximately from 18 to 59 years, and from 60 to 64 years, with the policy not renewable after 64. However, variations in age groupings and in renewals are frequent and dependent on occupation and sex. But renewals are rather uniformly and sharply limited to 64 years of age or less. The classification of occupation has the ratings, A, B, C, D, etc. The premium for a policy holder in an occupation with a B rating is approximately 20 per cent higher than that for A, the C rating is approximately 40 per cent higher than A, and the D rating is approximately 70 per cent higher than A. Physicians and surgeons, other than roentgenologists, have a C rating, the roentgenologists are rated D.

The International Travelers Assurance Company, Burt Building, Dallas, Texas, transacts life, health and accident business. It is a life insurance company and is not rated. It has our recommendation. The policy holders' surplus (statement) is $163,128. In 1935, it adopted a strict underwriting policy, and since then has not renewed a great many old health and accident policies which had been in force for years. In 1935, the loss ratio was 56.5 and expense ratio 33.7; in 1939, the loss ratio was 41.1 and expense ratio 45.4. The expense ratio was greater than the loss ratio in 1938 and 1939. No dividends have been paid from 1932 to 1939.

A Special Health and Accident Policy is offered to the members of the State Medical Association of Texas. The policy is non-cancelable to an individual policy holder unless cancelled to all policy holders. The insuring clause provides indemnity against loss from accidental bodily injury and from sickness, each beginning the first day of disability. Monthly in-

*A preliminary report of the Council on Medical Economics, State Medical Association of Texas.

demnity is paid for total disability from injury or from total confining sickness for a period not to exceed 12 months, and after this a monthly indemnity for total and continuous disability from injury so long as it lasts. Partial indemnity is paid for non-confining disability for a period not exceeding 3 months. The monthly indemnities vary in amounts from $40 to $200, with a schedule of elective indemnity payments, with principal sums of from $1,000 to $5,000. The policy contains the standard clauses on identification, air travel and clinical history. The schedule of premiums is based on the age of the policy holder and the indemnity desired. This policy is recommended.

The Metropolitan Casualty Insurance Company of New York, 10 Park Place, Newark, N. J., is affiliated with the Firemen's Insurance Company group. The capital and surplus are ample for contingencies, and adequate reserves are maintained for claims. The volume of business written is in proper proportion to policy holders' surplus. The policy holders' surplus is $2,763,196. Our general policy holders' rating of this company is excellent, and our financial rating is B. This company has our recommendation. On accident and health insurance in 1938, the loss ratio was 49 and expense ratio 49. The expense ratio was not greater than the loss ratio. Dividends have been paid from many years prior to 1897, to and including 1939, except 1932-1935.

A Special Group Policy is offered the members of the State Medical Association of Texas. The policy is non-cancelable to an individual policy holder unless cancelled to all policy holders. The insuring clause provides indemnity against loss from accidental bodily injury and from sickness, beginning on the date of injury and on the 7th day of sickness. Weekly indemnity is paid for total disability from injury or from sickness for a period not to exceed 52 weeks. The weekly indemnities vary in amounts from $20 to $50, with a schedule of elective indemnity payments, and with principal sums from $2,000 to $5,000. The policy contains the standard clauses on identification, air travel, vacation and treatment of minor injuries. The policy is renewable to 70 years of age. This policy has a flat premium of $80 for the maximum policy of $5,000 principal sum and $50 per week indemnity, but is 31 per cent less than this company is offering a comparable policy to individual policy holders in Class "C," between the ages of 18-59 years. It is 15 per cent less than this company is quoting a comparable policy to individual policy holders in Class "A," between the ages of 18-59 years. This policy has our recommendation.

This company has agreed to furnish the Council an annual report on this group as to premiums earned, premiums written, loss ratio and expense ratio. This information is for the mutual advantage of the Metropolitan Casualty and the members of the State Association; for if a lower loss ratio eventually occurs, this should ultimately result in either a lower premium or a still more liberal policy.

Respectfully submitted,
COUNCIL ON MEDICAL ECONOMICS,
C. C. CODY, JR., Chairman,
THOMAS B. BOND,
C. C. FOSTER,
W. C. TENERY,
W. F. STARLEY.

SUGGESTS FURTHER VITAMIN E RESEARCH

The published results of the treatment of habitual abortion (miscarriage) with vitamin E are sufficiently encouraging to justify further clinical experiment, a report in *The Journal of the American Medical Association* for June 1, authorized by the Association's Council on Pharmacy and Chemistry, declares.

"Such experiments are justified only if preparations of vitamin E of known activity are used and if adequate diagnosis and clinical control can be established," the report says.

LIBRARY NOTES

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Requests for packages should be addressed "Library, State Medical Association of Texas, 1404 W. El Paso Street, Fort Worth, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Only one package may be borrowed at a time, and packages are allowed to remain in the hands of the borrower for 14 days.

Package Service

Packages were mailed to the following from the Library of the State Medical Association during September:

Dr. R. W. Taylor, Lufkin—*Heart, block* (5 articles).

Dr. P. C. Talkington, Dallas—*Obesity, therapy* (16 articles).

Mrs. J. W. Barr, Concho—*Public Health, rural* (7 articles).

Dr. O. C. Egdorf, Wichita Falls—*Eyes, embryology* (3 articles).

Dr. W. E. Payne, Slaton—*Thrombo-Angiitis, obliterans* (20 articles).

Dr. Victor E. Schulze, San Angelo—*Coccidioides* (19 articles).

Dr. Chas. B. Reed, Clarksville—*Urachus* (8 articles).

Dr. R. C. Stokes, Vernon—(1 journal).

Dr. Otis E. Marler, Corpus Christi—*Sterility* (24 articles).

Dr. C. R. Cockrell, Baird—*Pneumothorax* (14 articles).

Dr. D. C. Enloe, Sherman—*Anesthesia, spinal* (25 articles).

Dr. M. B. Aynesworth, Waco—*Undulant Fever* (23 articles).

Dr. L. B. S. Richter, Yoakum—*Nitrophenol* (18 articles).

Dr. S. W. Hughes, Brownwood—(1 book).

Dr. David M. Marcley, Amarillo—*Embolism, coronary* (9 articles).

Dr. Otto Lippmann, Austin—*Eyes, movements* (6 articles).

Dr. T. Wade Hedrick, Abilene—(3 books).

Dr. Edwin B. Peel, Longview—*Frontal Bone, osteomyelitis* (1 article).

Dr. A. L. Hathcock, Palestine—*Anesthesia, history* (7 articles).

Dr. Marion R. Lawler, Mercedes—*Diabetes Mellitus* (21 articles); *Tuberculosis, pregnancy and tuberculosis* (11 articles).

Dr. R. S. Fillmore, Jacksboro—*Fistula, branchial* (11 articles); *Biography* (2 books).

Dr. T. C. Cole, Huntsville—(1 journal).

Dr. Wm. M. Gambrell, Austin—*Undulant Fever* (29 articles).

Dr. H. H. Niehuss, Gladewater—*Medicine, progress* (12 articles).

Dr. C. J. Koerth, San Antonio—*Tongue, tuberculosis* (4 articles).

Dr. E. H. Cary, Dallas—*Public Health, coöperation* (11 articles).

Dr. Jesson L. Stowe, El Paso—*Stomach, foreign bodies* (24 articles).

Dr. H. M. Anderson, San Angelo—*Tuberculosis, diagnosis* (25 articles).

Dr. Heinrich Lamm, La Feria—(1 journal).

Dr. Clayton Shirley, Tyler—*Medicine, socialized* (6 articles).

Dr. Thomas E. Cook, Dallas—*Cancer, etiology and pathogenesis* (16 articles).
Dr. C. T. Collins, Waco—*Fistula, rectal* (13 articles).
Dr. J. Lawrence Clark, Ennis—*Intestines, anastomosis* (11 articles).
Dr. A. R. Thomason, Dallas—*Bile Ducts, diseases* (13 articles).
Dr. K. B. Urban, Crystal City—*Hygiene and Sanitation* (4 articles).
Dr. Robert H. McCarty, Lubbock—*Urinary Tract, infections* (15 articles).
Dr. A. W. Multhauf, El Paso—*Sterility, therapy* (5 articles).
Dr. B. A. Kirkpatrick, Taylor—*Obesity, therapy* (25 articles).
Dr. Orion Thompson, Tyler—*Strongyloidosis* (13 articles).
Dr. J. W. Tottenham, Brownwood—(1 book).
Dr. R. R. McDaniel, Quanah—*Ovary, tumors* (11 articles).
Dr. F. T. McIntire, San Angelo—(11 journals).
Dr. L. T. Pruit, Beaumont—(2 journals).
Dr. T. D. Frizzell, Quanah—*Tularemia* (30 articles).
Dr. Neill Simpson, Waco—*Tuberculosis, Pulmonary, artificial pneumothorax in* (7 articles).
Dr. M. W. Sherwood, Temple—(1 journal).
Dr. C. A. Kunath, San Angelo—*Cancer* (14 articles).
Dr. Robert Hargrave, Wichita Falls—*Cranium, fractures* (24 articles).
Dr. Frank C. Hodges, Abilene—*Fractures, complications* (5 articles).
Dr. E. M. Sykes, San Antonio—*Meningitis* (23 articles).
Dr. F. S. Ewing, Sinton—*Testicles, undescended* (14 articles).
Dr. M. C. Carlisle, Waco—*Carbon Tetrachloride, toxicity* (12 articles).

Accessions

J. B. Lippincott Company, Philadelphia—Leaman: Management of the Cardiac Patient.

F. A. Davis Company, Philadelphia—Diagnosis and Treatment of Cardiovascular Disease, two volumes.

American Medical Association, Chicago—New and Nonofficial Remedies; Council on Pharmacy and Chemistry Reports.

Summary

Reprints received, 1,027	Local users, 47
Journals received, 149.	Borrowers by mail, 52
Items consulted, 248.	Packages mailed out, 54
Items taken out, 248	Items mailed out, 626

Total items consulted and loaned, 1,122.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Nonofficial Remedies:

Ampuls of Camphor.—Ampuls of camphor contain a sterile solution of approximately 20 Gm. of camphor in a sufficient quantity of ampul oil to make 100 cc. unless another concentration of the solution is stated on the label, and yield not less than 93 per cent and not more than 103 per cent of the labeled amount of camphor."—N. F. It is used parenternally to sustain the circulation and respiration in collapse. It is supplied in the form of ampoules 0.2 Gm. (3 grains), 1 cc. and 2 cc. Endo Products, Inc., New York.

Solution of Ferric Subsulfate.—"An aqueous solution containing in each 100 cc. basic ferric sulfate equivalent to not less than 20 Gm. and not more than 22 Gm. of Fe."—N. F. It is used as a local styptic and astringent. It is marketed in the form of Arzol Ferric Swabs which consist of cotton pledgets medicated with a solution of ferric subsulfate, N. F., 75 per cent; glycerin approximately 25 per cent and phenol 0.5 per cent. Arzol Chemical Co., Nyack, N. Y.—*J. A. M. A.*, July 27, 1940.

ACCEPTED DEVICES FOR PHYSICAL THERAPY

The following devices have been accepted by the Council on Physical Therapy of the American Medical Association for inclusion in its list of accepted devices for physical therapy:

Faries S-4 Sunlamp Models 2404-2455.—The Faries S-4 Sunlamp is designed to produce ultraviolet radiation within the limits of the standards set by the Council for devices using the term "sunlamp." These standards require that the energy of wavelengths shorter than and including 2,800 angstroms shall not exceed 1 per cent of the total energy of wavelengths between 2,804 and 3,132 angstroms. These wavelengths fall in the spectral region of low erythematogenic action and render the sunlamp suitable for unsupervised use by the layman. The lamp operates only on alternating current. The lamp was investigated in a laboratory selected by the Council and was found to comply with the Council's requirements for acceptability of a sunlamp for spectral quality of ultraviolet radiation. Faries Manufacturing Company, Decatur, Ill.—*J. A. M. A.*, July 27, 1940.

DeVilbiss Sprayers, Atomizers, Vaporizers.—The following DeVilbiss devices have been investigated by the Council on Physical Therapy and accepted for inclusion on its list of acceptable devices: Atlas No. 32 powder blower; DeVilbiss No. 288 powder blower; DeVilbiss No. 252 powder blower; DeVilbiss No. 260 atomizer for tannic acid; DeVilbiss No. 177 syringe; DeVilbiss No. 286 power atomizer; DeVilbiss No. 287 power atomizer; DeVilbiss No. 151 power atomizer; DeVilbiss No. 43 glass nebulizer; DeVilbiss No. 40 glass nebulizer; DeVilbiss No. 12 adjustable tip atomizer; DeVilbiss No. 19 adjustable tip atomizer; DeVilbiss No. 27 adjustable tip atomizer; DeVilbiss No. 251 hard rubber atomizer; DeVilbiss No. 170 surgeon's atomizer, and Atlas No. 112 electric steam vaporizer. The DeVilbiss Company, Toledo, Ohio.—*J. A. M. A.*, July 20, 1940.

Columbian Respirator.—The Columbian Respirator produces artificial respiration simulating natural breathing for indefinite periods of time. The respirator applies a new principle for controlling vacuum and pressure which is described as a "liquid sealed air pump." A cylindric steel chamber containing a removable bed is mounted on a framework, which also supports the operating mechanism. A one-sixth horse power motor operates the unit on direct or alternating current. It is possible to obtain within the chamber a maximum positive pressure of 15 cm. and a maximum negative pressure of 15 cm. The respirator is 56 inches high, 80 inches long and 32 inches wide, and the shipping weight is approximately 1,300 pounds. The bed assembly is supported on large roller casters so that it can be pulled full length out of the respirator shell. The bed frame is hinged and a hand screw outside the respirator permits raising and lowering the patient's shoulders. A mattress made with "kapok" filler and transparent waterproof cover is standard equipment. An auxiliary hand drive is provided for use in case of power failure or when electric power is not available. A qualified investigator for the Council reported that the apparatus gave satisfactory clinical service. Columbian Steel Tank Company, Kansas City, Mo.

PROPAGANDA FOR REFORM

Basmeter Not Acceptable.—The Council on Physical Therapy of the American Medical Association reports that it has received many inquiries concerning the Basmeter, manufactured by the High Tension Electric Corporation, New York. The Council therefore procured a Basmeter on the open market for investigation and report. According to the advertising "The Basmeter is a new method of calculating the Basal Metabolic Rate by means of a simple slide rule principle. It eliminates the usual objections to taking a B-M-R, such as time, space, and preparation." The clinical data required for the use of the device are blood pressure, systolic and diastolic; pulse rate; respiratory rate; age; body weight. From data compiled by the Council, it would appear that the calculation of the metabolic rate by the Basmeter gives results which are not in agreement with previously determined correlations obtained by the conventional methods. The Council conducted a survey covering 110 cases in which the basal metabolic rates determined by use of the Basmeter were compared with those determined by use of the ub-DuBois standard and/or the Harris-Benedict standard. Only in ten of these cases did the rates obtained by means of the Basmeter agree within 2 per cent with the rates obtained with the standard methods, and in many cases the variation was very great. The Council on Physical Therapy voted not to accept the Basmeter for inclusion in its list of accepted devices.—*J. A. M. A.*, July 6, 1940.

Desoxycorticosterone Acetate.—In the June 30 issue of *The Journal of the American Medical Association* appeared three papers on the treatment of Addison's disease and a statement by Dr. E. S. Gordon on the therapeutic status of desoxycorticosterone acetate published under the auspices of the Council on Pharmacy and Chemistry. Our knowledge of the effectiveness of this substance and the possible dangers from indiscriminate use were clearly defined. Recently the Schering Corporation, one of the manufacturers of desoxycorticosterone acetate (Cortate), has been conducting an active advertising campaign to promote the use of this substance in the prevention and treatment of surgical shock. Actually the clinical evidence to support claims for using desoxycorticosterone acetate in the treatment of secondary shock is scanty. Most of the clinical data on which the Schering firm bases its recommendation for the use of desoxycorticosterone acetate in shock appears in a report by Perla and his associates, as yet unconfirmed, on the successful prevention of surgical shock in debilitated patients who were subjected to operation. Confirmation of the work of Perla and his associates with evidence supported by accurate scientific studies should be awaited before routine therapeutic use is attempted. Particularly opportune at this time is the statement by the Council that desoxycorticosterone does not furnish complete replacement therapy and the warning against the indiscriminate and excessive use of this substance in routine therapy.—*J. A. M. A.*, July 6, 1940.

Clark Hydrotherm Not Acceptable.—The Council on Physical Therapy of the American Medical Association reports that the Clark Hydrotherm, manufactured by the Clark Electrical Equipment Company, Warren, Pa., is described in the firm's advertising as a "humid air Fever Box." This device was not submitted to the Council for investigation and the Council's report is based therefore on the advertising and promotional matter distributed by the firm. A giant rubber hot water container, said to be 30 by 78 inches, called the Hydroelectric Mattress, appears to be the main feature of the device. As described in the advertising, "It is inflated with 10 gallons of water and air which is heated to any desired degree thermostatically." This mattress is placed on a bed assembly. In the base of this assembly, a "unique vapor generator" is claimed to maintain a 75 per cent humidity in the cabinet. The enclosing cabinet or hood, on which are located various indicators and gauges, is apparently used only when the temperature or fever is being induced. It is stated, "A very important feature is the fact that ⅔ of the enclosing cabinet is mounted upon rollers so that it can be moved back over the foot end after the desired degree of fever is obtained. Fever can be maintained for any number of hours with cabinet moved back as the conduction of heat from the Hydroelectric Mattress is sufficient to hold the body temperature." The advertising appears to be quite evenly proportioned between describing the mechanical virtues of the apparatus and its money-making possibilities. The physician is informed that "Producing results with fever will definitely expand your practice and income." The promotional matter distributed by the firm has the flavor of advertising copy used to distribute money-making amusement devices rather than professional equipment for a physician's office or a clinic. There is even described a "meter-matic plan" whereby a certain number of coins are deposited in the apparatus each day until it is paid for. The practice of fever therapy, in the opinion of the Council, should be limited to those who have been especially trained in this highly specialized field. Much instruction and practice in a fever clinic are required before such training is sufficient. According to correspondence and advertising, W. W. Clark is president of the Clark Electrical Equipment Company, Warren, Pa., and also of the Electrical Research Laboratories, Warren, Pa., which manufactures the "Dr. Warren's Infra-Red Sitz Bath," a device found not acceptable by the Council (*The Journal of the American Medical Association*, September 14, 1935, p. 881). The Council on Physical Therapy declared the Clark Hydrotherm not acceptable for inclusion in its list of accepted devices.—*J. A. M. A.*, July 13, 1940.

Annual Meeting of the Council on Pharmacy and Chemistry.—The following were among the subjects considered at the annual meeting of the Council on Pharmacy and Chemistry: The Council voted that a special committee be appointed to consider in extenso the digitalis unit and report back to the Council. It was emphasized that digitalis, or anything that purports to be digitalis, is an official drug and must be standardized according to the methods laid down by the U. S. Pharmacopeia; that if there is a demand for another standard, that standard may appear on the label in addition to the U.S.P. standard, provided the labeling of the second standard is not misleading. The Councils' Committee on Contraceptives made a progress report concerning certain articles that have been authorized for publication. The Council voted to adopt the pharmacopeial term "thiamine hydrochloride" to replace the term suggested by the discoverer, *i. e.* "thiamin chloride." The Council authorized the Secretary's office to approach certain persons with the request that they contribute to the new series of articles on glandular physiology and therapy. The Council discussed the present status of pneumonia therapy. It was the general consensus that there is not sufficient information yet available to determine the value of combined serum and sulfapyridine compared with adequate serum therapy alone or with adequate sulfapyridine therapy alone. The Council members felt that the practice of typing should be continued for information, both in relation to treatment and for statistical purposes. The Council also voted to accept Type III rabbit antipneumococcic serum for a period of one year only. Furthermore,

the Council will consider with the view to acceptance the carbohydrate material for skin testing and treatment in conjunction with antipneumococcic serums (Francis test). The Council concluded that a statement should be prepared announcing recognition of solution of zinc insulin crystals for inclusion in New and Nonofficial Remedies. The referee was authorized to formulate a report regarding the problems relating to antiseptics, bacteriostatic agents, preservatives and disinfectants, for the consideration of the Council and, if possible, to consult with the federal authorities concerned with these questions. A progress report was made concerning the further investigation of catgut sutures. The Council discussed the question of the increasing number of large size brochures dealing with proprietary drugs. In this form of advertising the commercial houses take on themselves the task of educating the physician in the fields to which their products pertain. It was voted that a special committee be appointed to inquire into the matter of advertising brochures and report to the Council, especially in regard to the abuses. The Council voted to revise and rearrange the New and Nonofficial Remedies chapter on serums and vaccines. The Council authorized a review to be made of the lipoid pneumonia problem, on the basis of which the Council might again consider what action to take in the case of nasal sprays in which liquid petrolatum is the vehicle. The Council ordered that revisions be made in the permissible claims for riboflavin, nicotinic acid and pyridoxine (vitamin B_6), these alterations to be passed on by the Cooperative Committee on Vitamins with the view of later publishing a revised edition of the pamphlet entitled "The Status of Certain Questions Concerning Vitamins," and concordant revision of the statements in New and Nonofficial Remedies. The Council voted to accept the terms "pyridoxine" and "pyridoxine hydrochloride" for the substances known as vitamin B_6 and vitamin B_6 hydrochloride, provided the nomenclature met with the approval of the American Society of Biological Chemists and the American Institute of Nutrition (an official announcement of the Council on these names was published in *The Journal of the American Medical Association,* June 15, 1940, p. 2387). The Council also discussed the term "halibut liver oil with viosterol" for a product containing halibut liver oil with viosterol and other fish liver oils. The addition of cod and other fish liver oils to a product sold under the labeled name "halibut liver oil with viosterol" will make the product subject to action under the misbranding provisions of the Federal Food, Drugs and Cosmetic Act even though the presence of the added ingredients is declared elsewhere on the label. The Council therefore voted that the present New and Nonofficial Remedies' definition for halibut liver oil with viosterol be revised to read: Halibut liver oil-N. N. R. to which has been added sufficient viosterol (activated ergosterol) to assure a potency of not less than 10,000 U. S. P. units of vitamin D per gram.—*J. A. M. A.*, July 13, 1940.

J. R. Brewster and the Government Agencies.—The Bureau of Investigation of the American Medical Association reports that J. R. (Reese) Brewster and the Brewster Laboratories of Nashville, Tenn., conducted a mail order business in the sale of various nostrums which they falsely represented to cure tuberculosis, cancer, asthma and some other diseases. On Dec. 21, 1934, the Post Office issued a fraud order closing the mails to Brewster and his concern. Later this fraud order was extended to cover the names "New Deal Clinic" and "Dr. Reese Brewster," trade styles adopted by Brewster to evade the original order. In an earlier case the Food and Drug Administration had seized interstate shipments of four nostrums sent out by J. R. Brewster when he was trading as Brewster Laboratories. Government chemists reported that the "Germ Destroyer" (for tuberculosis, cancer, asthma and some other things) contained a light petroleum oil, a saponifiable oil and turpentine; and that the three others were essentially similar in composition except that the "Throat Wash" (for tonsillitis and chronic throat trouble) also contained a trace of ferric chloride, the "Throat-Eaz" (for coughs, croup and "female trouble") included a trace of potassium iodide, and the "Liver Tonic" (for stomach disorders) contained no turpentine. The government charged that the claims made for these products in the respective disorders named were fraudulent, but a jury in a district federal court brought in a verdict of not guilty. In September, 1938, a Federal Trade Commission release reported that the Commission had entered a complaint against one Jefferson R. Brewster, then operating from Dallas, Texas, under the names Brewster Laboratories and Dr. Reece Brewster, charging misrepresentations in the sale of various nostrums. It was further charged that Brewster's products were not, as represented, prepared in laboratories nor had Brewster had medical training or laboratory experience and consequently was not qualified to practice medicine. Apparently this case has not yet been settled.—*J. A. M. A.*, July 13, 1940.

Resyl-Ciba Not Acceptable for N. N. R.—The Council on Pharmacy and Chemistry reports that Resyl-Ciba is a guaiacol compound claimed to be glycero-guaiacol-ether which has been extensively promoted by Ciba Pharmaceutical Products, Inc. In view of the firm's active advertising campaign, it was asked if it cared to present the product for the Council's consideration. This the firm did in the usual manner. The Council omitted from New and Nonofficial Remedies all creosote and guaiacol compounds because it was found that evidence is lacking to show that this group of compounds is a necessary part of the modern therapeutic armamentarium (*The Journal of the American Medical Association,* Jan. 15, 1938, p. 209). In its examination of the advertising submitted by Ciba Pharmaceutical Products, Inc., the Council found it replete with therapeutic claims which, in view of the Council's investigation referred to, must be held to be unwarranted. No acceptable evidence is offered to support the claim that Resyl-Ciba possesses "all the therapeutic properties of creosote and guaiacol without their disadvantages." In view of its previous action, and of the nature of the advertising propaganda for Resyl-Ciba, the Council declared the product unacceptable for inclusion in New and Nonofficial Remedies because of unwarranted therapeutic claims. The firm replied to the Council's report with various suggestions for revision of its advertising and stated that this revision of the claims would be made in the next edition of the advertising. The fact remains, however, that the present evidence available serves to show that creosote and guaiacol have no place in the modern materia medica. Recently E. J. Fellows (*Am. J. M. Sc. 197:* 683 [May] 1939) has confirmed the Council's opinion of the lack of pharmacologic rationale for the use of calcium creosotate in pulmonary disorders.—*J. A. M. A.*, July 20, 1940.

Annual Meeting of the Council on Foods.—Many subjects were considered at the 1940 meeting of the Council on Foods of the American Medical Association: In view of the new Food, Drug and Cosmetic Act, which includes provisions for the more precise labeling of processed foods, and the Wheeler-Lea Amendment, which gives the Federal Trade Commission greater authority to police objectionable claims in advertising, the Council believes there no longer should exist a need for detailed examination by the Council of much advertising material. How-

ever, the demand for the Council to provide an authoritative opinion on questions pertaining to foods and health still remains. For these reasons it would seem proper for the Council to consider a revision of its policies to permit the relinquishment of certain functions and the expansion of others. Action was deferred on these questions until after a thorough study could be made of the manner by which the Council might utilize its resources to the fullest possible extent.

Plans were discussed for revision of the book Accepted Foods and Their Nutritional Significance, with a view of keeping the volume up to date and having it represent a convenient reference work which provides the opinion of the Council on questions of nutrition.

The Council decided that, with few exceptions, fortification of general purpose foods could well be restricted to the restorative addition of important nutritional essentials for which a greater intake is considered to be in the interest of public health. In this way processed foods would be brought up to the original high nutritive level of unprocessed foods. Thus, it was decided that the addition to breakfast cereals of vitamin B_1, in the form of thiamine hydrochloride, up to the level of oatmeal, which is richer in thiamine than most other cereals, would be in agreement with the Council's policy. It was decided that no objection would be taken to the restorative addition of substances rich in riboflavin to processed cereal foods. Claims must be restricted to statements of fact, however, such as "this product has been enriched with riboflavin to the value of whole wheat," or the like, because the principal dietary sources of riboflavin are milk and meats, and not cereals, even of the whole grain variety. With respect to special purpose foods, the Council requires that the intended dietary use of such special products be mentioned on the label and that the contribution which the product makes to the diet likewise be declared. With respect to the permissible vitamin (or mineral) content of such products, the Council decided that each product would need consideration on its own merits and no limit would be placed on the extent of fortification up to what is considered to be the normal dietary requirement for a healthy person.

The Council discussed that form of advertising of food products which partakes of the nature of dietary advice to the general public. While the Council does not object to advertising which includes simple directions for the preparation of special diets, it is important that this work should be done by properly qualified persons and the diets suggested should be in accord with what authorities consider desirable. The Council is opposed to slipshod methods of offering dietetic advice, and to advertising which overemphasizes the nutritional value of individual foods:

Consideration was given to recent evidence purporting to show that infants fed on milk containing 135 U. S. P. units of vitamin D to the quart, and no other dietary source of vitamin D, exhibit excellent growth. Evidence shows that milk which provides 400 U. S. P. units of vitamin D to the quart permits growth at an optimal rate, whereas milk containing 135 U. S. P. units to the quart does not. The referee emphasized the importance of continuing growth studies on babies over a considerable period of time. The Council concurred in the referee's views, and the claim that 135 U. S. P. units of vitamin D to the quart yields a milk which produces excellent or optimal growth was considered not established. The Council reported that strained foods are useful for a limited period, but their long continued use may defeat the main purpose of introducing them into the dietary of the infant. Chopped foods, or so-called junior foods, represent a transition food, likewise of value for a limited time. The Council has opposed any representations that chopped foods should be continued in the diet of a child beyond the age for which they are of particular value. Ordinarily this may be at about 1½ years, with variations depending on the individual child. The term "junior food," which has been introduced for certain commercial preparations, is considered relatively unobjectionable, provided the claims are properly restricted and an appropriate explanatory statement accompanies the term on labels to indicate the age group for which the products are suited. —*J. A. M. A.*, July 20, 1940.

Abortifacient Pastes.—In spite of repeated warnings against the use of abortifacient pastes, physicians continue to write to *The Journal of the American Medical Association* requesting information about such substances. These inquirers have concerned themselves mainly with two products—Leunbach's Paste and Interferin. Leunbach's Paste is prepared from a number of substances alleged to include potassium hydroxide, sodium hydroxide, iodine and potassium iodide in an olive oil and cacao butter base. Interferin is claimed to be a paste containing iodine. Numerous reports have indicated that insertion into the uterus of such pastes has resulted frequently in infections and fatalities. Nevertheless, numerous inquiries indicate that active promotion of these preparations continues. In recent advertising material it was stated that Interferin, marketed by Keefer Laboratories of Chicago, was effective in 5,000 cases without fatalities. References to scientific publications in medical journals were not cited. Leunbach's Paste, marketed by Merz & Company, Inc., Newark, N. J., is also advertised without accompanying authentic evidence as to its safety for therapeutic purposes. Leunbach's Paste is recommended as well for the treatment of delayed menses, primary amenorrhea, dysmenorrhea, endometritis and endocervicitis. Merz & Company, Inc., claims that there is little danger of infection. Reports in the literature have indicated that deaths following the use of similar pastes resulted from air embolism, fat embolism and infection. The ethical physician will of course refrain from using such preparations. Other persons who have little interest in the welfare of the patient may risk the use of abortifacient pastes simply because the preparation is easy to secure and easy to administer.—*J. A. M. A.*, July 20, 1940.

A "Hair Color Restorer" and a "Hair Grower" Found Fraudulent.—The Bureau of Investigation of the American Medical Association reports that "hair color restorers" were widely advertised until the Food and Drug Administration, which enforces the Food, Drug and Cosmetic Act, notified manufacturers of such products that this designation would be considered under the act as false and misleading. Within the past year the Post Office Department has closed the mails to the Dermo Co. and Dermo-Cosmetic Products Co. of New York, which advertised such a product under the name "Grey-X," along with a "dandruff lotion" called "Hair-Giene." The business was run by a Joseph Kesler and his wife, Anne Kesler, apparently also known as Anne Kaye. Statements made by the promoters of Grey-X to the Post Office Inspector in this case and substantiated by analysis made by government chemists revealed that Grey-X was a mixture of lead acetate, sulfur, glycerin, rose water, distilled water and perfume. The Solicitor's memorandum on this case pointed out that, despite the promoters' representation that Grey-X "does not 'dye' the hair," expert medical evidence showed that it was, in fact, "an ordinary artificial dye of the slow-acting type" and would not "restore grey or white hair to its 'natural' color as claimed" but would "merely dye it a dull, metallic

and unnatural black, the intensity of the shade varying slightly in accordance with the amount of the product applied." The expert evidence further brought out "that the lead acetate contained in the preparation may be absorbed in the sebaceous glands of the scalp with dangerous results to the user." Information from the company itself, supplemented by the work of the government chemists, brought out that the ingredients of Hair-Giene were salicylic acid, sulfur, quinine hydrochloride, tinctures of pilocarpine, mullein and cantharides, olive oil, shale oil, "perfumed oil," thymol, iodine and water. The Solicitor's memorandum on this case commented in part that expert medical evidence showed that, although Hair-Giene when used as directed would act as a counterirritant, rubefacient and lubricant and might bring about a temporarily increased flow of blood to the normal scalp, it could not cause a supply of blood to reach the obstructed papillae; and that in some cases where the blood vessels are not completely obstructed or the papillae altogether atrophied the preparation may produce the growth of down or "fuzz" that cannot be considered normal hair. The medical evidence also showed that though in lubricating the scalp Hair-Giene might tend to relieve itching due to dryness it would not overcome other causes of itching scalp such as ringworm or eczema but instead might add to the deposit of "scruff" and increase any infection present. The Post Office Department found that the promotion of this business was a scheme for obtaining money through the mails by means of false and fraudulent pretenses, representations and promises, and on Sept. 22, 1939, a fraud order was issued against Dermo Co., Dermo-Cosmetic Products Co., Dermo Cosmetic Products Co., Joseph Kesler, Manager, Anne Kay, and their officers and agents as such, at New York. On April 29, 1939, the Federal Trade Commission announced that this business had agreed "to cease representing that the use of their product will permanently restore gray hair to its natural color, keep the scalp healthy, eradicate dandruff, or promote the growth of hair." They also agree to cease representing that the product is a French discovery, is not a dye, and to discontinue otherwise making any misleading or untrue statements as to its composition.—*J. A. M. A.*, July 20, 1940.

Various "Sex" Frauds—II.—The Bureau of Investigation of the American Medical Association reports that during the past year the Post Office Department has closed the mails to the following various frauds of the sexual type: No. 1362, Dec. 6, 1939 (name of treatment not reported); F. J. Schreiber, Pittsburg, Kan.; blue pellets for "youthful pep"; containing phosphates, sulfates, chlorides of sodium and potassium; small amounts of zinc and iron; petrolatum (0.044 Gm.) and strychnine and yohimbine (0.0015 Gm.) per tablet; white tablets for "prostate sufferers"; methenamine (5.18 grains per tablet) with a little starch. No. 13625, Dec. 27, 1939, "Vigotabs," Dee Company, Chicago; for sexual weakness: essentially damiana, with zinc phosphide (one-twelfth grain), strychnine (0.023 grain) and anhydrous ferric oxide (one-twelfth grain) per tablet; Bladotabs" (Dee Company, Chicago), for kidney and bladder troubles: plant material including cubebs, sandalwood, copaiba, Venice turpentine and one-twentieth grain of exsiccated ferrous sulfate per tablet. No. 13631, Dec. 29, 1939, "Vita-Male"; The Mason Products Company of California and The Mason Laboratories of California, Los Angeles; for sexual debility, sterility, glandular disturbances and some other things; in each tablet 7 grains of seaweed, which contains small amounts of iodine, sodium, potassium, calcium, magnesium, iron, sulfur, chlorine and phosphorus. No. 13689, Jan. 19, 1940, "Jermol Perles"; Interstate Health Products, New York; claiming that loss of reproductive powers, premature old age, abortion in females, suckling paralysis in infants, improper development of boys and girls, and lowered vitality (loss of) "zest," "zip" and "pep" are due solely to vitamin E deficiency, and that their product which contained wheat germ oil would relieve these conditions; 2 minims of wheat germ oil to each "perle." No. 14171, May 27, 1940, "Glandex"; L. H. Paul and Hollywood Hygienic Products, Hollywood, Calif.; "sex rejuvenator"; in each tablet about one-sixth grain of thyroid, a "considerable amount" of protein, and "a very small amount" of iodine, with calcium oxide and phosphate. Paul previously had put out an essentially similar product, operating as "Vitalife Laboratory" and other titles, which business he had promised the Post Office to discontinue, whereas he appears simply to have changed the trade style under which he carried on his activities in this field. (On June 10, 1937, another government agency, the Federal Trade Commission, announced that it had got the Hollywood Hygienic Products, Inc., to promise to discontinue representing that its "Glandex" was a tonic and competent remedy for nervousness and sleeplessness; that its "Hollywood Dainties" had "germicidal qualities" which "become active at once"; that its "Ur-Gard" was a medical corps prophylactic effective for prevention or treatment of social diseases generally, and that its "Retardex" was a gland tonic, was harmless, and had been used with success where other remedies had failed.)—*J. A. M. A.*, July 20, 1940.

Misbranded "Patent Medicines."—The Bureau of Investigation of the American Medical Association reports that the following "patent medicines" have been the subject of prosecution by the Food and Drug Adminstration of the Federal Security Agency which enforces the Food, Drug and Cosmetic Act: *Benaris* (Benaris, Cleveland), essentially liquid petrolatum, camphor and ephedrine. *Gordon Red Liniment* (McConnon & Co., Winona, Minn.), essentially a small amount of camphoraceous material and red pepper in a solution of carbitol (ethyl ether of diethylene glycol) and water, colored with a red dye. *Neu-Life* (Health Laboratories, Sacramento, Calif.), essentially plant material including small percentages of calcium, magnesium, iron, iodine, sulfur, phosphorus, potassium and sodium. *Normal Nux* (Norden Laboratories, Lincoln, Nebr.), containing not more than 11 grains of strychnine and brucine sulfates per fluidounce. *San-O-Sen Antiseptic Spray* (San-O-Sen Laboratories, Chicago), essentially water, pine oil, soap and a small amount of glycerin. *Zilatone* (Drew Pharmacal Co., Buffalo), tablets containing phenolphthalein, bile salts, pepsin, pancreatin and extracts of plant drugs, including red pepper, nux vomica and a laxative.—*J. A. M. A.*, June 22, 1940.

Designations "Pyridoxine" and "Pyridoxine Hydrochloride" for Vitamin B_6 and Vitamin B_6 Hydrochloride.—The Council on Pharmacy and Chemistry reports that there has been a considerable exchange of correspondence with Dr. Paul Gyorgy, and with representatives of the committees on nomenclature of the American Chemical Society, the American Society of Biological Chemists, and the American Institute of Nutrition, as well as others, in reference to the adoption of a nonproprietary term for vitamin B_6. As a result of this exchange of opinions the Council has adopted "pyridoxine" as the nonproprietary term for the product tentatively known as vitamin B_6, and "pyridoxine hydrochloride" for the product tentatively known as vitamin B_6 hydrochloride. No brand has been accepted as yet by the Council.—*J. A. M. A.*, June 15, 1940.

Snake Venom Solution (Moccasin) (Lederle Laboratories, Inc.) Not Acceptable for N. N. R.—In 1935

the Council on Pharmacy and Chemistry published a preliminary report on the use of Snake Venom Solution (Moccasin) of the Lederle Laboratories, Inc., in the treatment of hemorrhagic conditions. The Council found the status of the preparation promising but felt that more adequate evidence was desirable for further consideration. In 1939 the firm called the Council's attention to the fact that twelve papers on the subject had been published since the Council's report, ten containing evidence for its therapeutic use and two dealing with an intradermal test and the action of the venom on capillary walls. This later literature has been considered by the Council. Allergic conditions and hemophilia were excluded as not meriting further consideration. The report, therefore, covers the evidence for the use of the preparation in the treatment of functional uterine bleeding, idiopathic epistaxis, multiple hereditary telangiectasis (Osler's disease), thrombocytopenic haemorrhagica and splenectomy. On the basis of its review of the latest literature and a statement received from a consultant who has had extensive experience with venom, the Council reached the following conclusions: (a) that Snake Venom Solution (Moccasin) (Lederle) is not acceptable for New and Nonofficial Remedies because the scope of its usefulness and its limitations have not been established satisfactorily and because its use tends to delay the resort to splenectomy, which is known to be curative in a large percentage of cases of chronic involvement —a delay which may result in death; (b) that the general employment therapeutically of Snake Venom Solution (Moccasin) before its scope and limitations have been determined would do more harm than good and is not in the best interest of the public.— *J. A. M. A.*, June 1, 1940.

NEWS

"Doctors at Work" is the title of the sixth annual series of dramatized radio programs to be presented by the American Medical Association and the National Broadcasting Company.

The series will open Wednesday, November 13, 1940, and run for thirty consecutive weeks, closing with a broadcast from the A.M.A. meeting at Cleveland, on June 3, 1941. The program is scheduled for 9:30 p. m. Central Standard Time over the Blue network, other NBC stations and Canadian stations.

The programs will dramatize what modern medicine offers the individual in the way of opportunities for better health and the more successful treatment of disease. Incidental to this main theme, the programs will explain the characteristics of the different fields of modern medicine and its specialties.

"Doctors at Work" will be broadcast from scripts by Wm. J. Murphy, NBC script writer and author of many previous AMA-NBC "shows" and other popular radio features. It will be produced under the direction of J. Clinton Stanley, director of "Medicine in the News," last season's successful AMA-NBC health program. Supervision will be by the AMA Bureau of Health Education, directed by W. W. Bauer, M. D.

Descriptive posters for local distribution may be had gratis from the Bureau of Health Education, American Medical Association, 535 N. Dearborn St., Chicago. Program titles will be announced weekly in *The Journal of the AMA* and monthly in *Hygeia, the Health Magazine.*

Dr. White's Sanitarium, Wichita Falls, Under New Management.—A change in ownership and management of Dr. White's Sanitarium, Wichita Falls, recently occurred, informs the Wichita Falls *Times.* Dr. M. W. Caskey is the new medical director of the institution. The building has been repainted inside and out and new equipment has been added. The institution is equipped to give special care and treatment to nervous and mental patients, alcoholics and drug addicts. The building is fireproof and so arranged that different types of patients live in separate parts of the building. There is a private room for each patient.

Interprofessional Conference on Child Development.—An interprofessional conference on child development was held September 5, at the Hotel Texas, Fort Worth, with representatives from the following organizations: Texas State Teachers Association, State Medical Association of Texas, Texas State Dental Society, Texas Society of College Teachers of Education, Texas Pediatric Society, Texas Health, Physical Education, and Recreation Association, Texas Neurological Society, and Texas Graduate Nurses Association, League of Nursing Education and State Organization of Public Health Nurses. The Texas State Department of Health was also represented and representatives were present from the Texas Congress of Parents and Teachers Association of Childhood Education. Common problems and proposals for interprofessional coöperation were subjects of discussion.

Committees from the State Medical Association in attendance on the conference included the Committee on Legislation, the Committee on Health Problems in Education, the Committee on Mental Health and the Committee on Maternal and Child Health.

The subject of health instruction was given particular attention by the Committee on Health Problems in Education of the State Medical Association, the committee from the Texas Health, Physical Education, and Recreation Association, and the committee for the nurses organization.

The subject of health service and cooperative activities on child health and child development received the special attention of committees of the Texas Pediatric Society, Texas Dental Society, College Teachers of Education, Texas Neurological Society, and the Mental Health Committee of the State Medical Association.

International Post-Graduate Medical Assembly Guests.—The International Post-Graduate Medical Assembly of Southwest Texas announces the following guest speakers for the 1941 assembly at San Antonio, January 28, 29 and 30, 1941:

Dr. H. R. Casparis, Nashville (Pediatrics).
Dr. John A. C. Colston, Baltimore (Urology).
Dr. Franklin G. Ebaugh, Denver (Psychiatry & Neurology).
Dr. Walter A. Fansler, Minneapolis (Proctology).
Dr. Temple Fay, Philadelphia (Surgery).
Dr. Tinsley R. Harrison, Nashville (Internal Medicine).
Dr. Roy D. McClure, Detroit (Surgery).
Dr. B. H. Nichols, Cleveland (Radiology).
Dr. John R. Page, New York City (Otolaryngology).
Dr. Francis M. Rackemann, Boston (Allergy).
Dr. Roy W. Scott, Cleveland (Internal Medicine).
Dr. A. Purdy Stout, New York City (Surgical Pathology).

President-elect Buie Honored.—Dr. N. D. Buie of Marlin, President-elect of the State Medical Association, was honor guest at a dinner and open house at the country home of Dr. C. M. Rosser, Dallas, September 13, advises the Dallas *News.* Other guests, in addition to distinguished laymen, included officers and past presidents of the Dallas County Medical Society. Speakers in addition to Dr. Rosser included

Dr. T. J. Crowe, Dallas, Secretary of the Texas State Board of Medical Examiners; Dr. Holman Taylor, Fort Worth, Secretary of the State Medical Association; Dr. Preston Hunt, Texarkana, President of the State Medical Association, and the honoree, Dr. Buie. Following the dinner, open house was held for the full membership of the Dallas County Medical Society.

The National Medical Association, the national organization of negro physicians, concluded its forty-sixth annual session at Houston, August 16, with the election of Dr. H. E. Lee of Houston as president. White Texas physicians who contributed to the program included Dr. Holman Taylor, Fort Worth, Secretary of the State Medical Association, who spoke on the subject, "Cooperation Between the Races in the Practice of Medicine"; Dr. E. W. Bertner, Houston, representing the American Medical Association; Dr. M. L. Graves, Houston, who brought greetings from the State Medical Association of Texas; Dr. R. H. Hargrave, Houston, who brought greetings from the Harris County Medical Society; Dr. Clarke, Houston, who extended greetings as president of the Post Graduate Assembly of South Texas; Dr. A. E. Greer, who presented a paper before the medical assocation on the subject, "A Consideration of the Anemias"; Dr. Karl John Karnaky, Houston, who presented a paper before the medical section, on the subject of "Medical Aspects of Uterine Bleeding as It Relates to the Endocrines"; and Dr. Henry Petersen, Houston, who presented a paper before the surgical section on the subject, "Tumors of the Breast."

Personals

Dr. John W. Spies, Dean of the University of Texas School of Medicine, Galveston, delivered the commencement address for the graduates of the Summer Session, August 26, states the Austin *Texan*.

Dr. Sol Estes, Abilene, recently returned from Chicago, where he took postgraduate work in surgery and gynecology, advises the Abilene *Reporter-News*.

Dr. George A. Taylor, Bettie, observed the fifty-first anniversary of his medical practice on August 11, 1940, informs the Fort Worth *Star-Telegram*.

Dr. R. G. Bruce, Minerals Wells, is visiting surgical clinics in New Orleans, St. Louis, and Rochester, Minnesota, and will take postgraduate work in Chicago, advises the Mineral Wells *Index*.

Dr. E. W. Clawater, Tyler, is taking postgraduate work in pathology, urology and clinical pathology at his alma mater, the University of Texas School of Medicine, informs the Galveston *News*.

Dr. N. D. Buie, Marlin, President-elect of the State Medical Association, was honor guest at a stag barbecue, September 21, at Hillsboro, with distinguished citizens of that city as hosts. Other honor guests with Dr. Buie were E. M. Dealey, Dallas, president of The Dallas Morning *News;* Dr. Clifford B. Jones, Lubbock, president, Texas Technological College; E. L. Kurth, Lufkin, president, Southland Paper Mills, Inc., and Colonel William C. Torrence, Waco, Commander, 143rd Infantry, Texas National Guard. The honorees were selected as men who have rendered faithful and valuable service to the State of Texas.

Marriages

Dr. Joe Bailey of Clyde, Texas, now serving an internship in Memphis, Tennessee, to Miss Margaret Murray at Austin, August 3, 1940.

Dr. Alfred Allen Hellams to Miss Catherine Elizabeth Wieler, both of Dallas, August 30, 1940.

Births

To Dr. and Mrs. George Y. Siddons, Fort Worth, a son, George Y. Siddons, Jr., July 11, 1940.

To Dr. and Mrs. A. I. Goldberg, Fort Worth, a daughter, Margie Ann, July 23, 1940.

SOCIETY NEWS

Austin-Waller Counties Society

August 20, 1940

(Reported by Otto E. Steck, Secretary)

Austin-Waller Counties Medical Society met August 20, 1940, in the Recreation Building, Hempstead, with seven members present. Malcolm A. Jones, president, presided.

J. A. Neely reported the case of a girl, age 16, who on physical examination required to attend a camp, was found to have dyspnea and a pulse rate of 48, with a drop of approximately every second beat. An electrocardiogram by Dr. Paul Ledbetter showed definite signs of heart block. After a month's rest and vitamin B therapy, the pulse rate was 50 with no sign of bradycardia. The patient is now allowed to be up three to four hours daily. Dr. Ledbetter thought that streptococcic infection when the patient had measles during the past winter was the probable cause. The case was discussed by Walter T. Brown and Sidney C. Walker.

Malcolm A. Jones reported the case of a girl, age 14, who was accidentally shot at very close range with a shotgun, the load entering about two inches above the right nipple. The patient when seen was in shock and had had considerable hemorrhage when she arrived at the hospital. She was given glucose in Hartman's solution the first day and a blood transfusion the second day. She had had no fever until after the sixth day, at which time it rose to 103 and ranged from 103 to 104 for several days. Exploration of the pleural cavity revealed blood but no pus. Antitetanic vaccine was administered. At the present the patient is up and doing well. A roentgenogram shows considerable air in the lung and some thirty to forty shot.

Herbert E. Roensch reported the case of a boy who was shot through the ilium with a 22 rifle. The bullet entered the abdominal cavity and caused several perforations through both large and small intestines. The patient recovered.

J. A. Neely reported two cases of fractured ribs with pleural hemorrhage and high fever.

W. S. Thiltgen expressed the opinion that blood in retained or concealed hemorrhage acts as a foreign protein.

Walter T. Brown reported the case of a woman, age 73, who died of coronary occlusion. At postmortem an organized clot was found in the muscle of the left heart, with softening of the myocardium and myocardial perforation. The patient lived eighteen days after the initial attack.

W. S. Thiltgen reported the case of a man who had become progressively weak. It was found that he was inhaling carbon monoxide from a defective exhaust pipe on his tractor and a defective muffler on his passenger car. Under supportive treatment the patient recovered in about four months.

Other Proceedings.—A communication from the secretary of the State Medical Association regarding the medical preparedness questionnaire was read by the secretary.

The secretary was directed to accept two or three papers offered by the State Health Department in the following order: (1) Deficiency Diseases, (2) Mental Health, (3) Evaluation of Immunization Agents. The secretary was also instructed to notify the Upjohn Company of the acceptance for a pro-

gram of a motion picture on endocrine therapy of sterility.

The next meeting of the Society will be held October 15.

Delta County Society

September 2, 1940

(Reported by Osler Y. Janes, President)

Delta County Medical Society met September 2, 1940, with six members present. An interesting sound motion picture on the preparation and clinical use of pregnant mare's serum was presented through the courtesy of The Upjohn Company.

Hunt-Rockwall-Rains Counties Society

August 22, 1940

(Reported by M. L. Wilbanks, Secretary)

Hunt-Rockwall-Rains Counties Medical Society met August 22 on the lawn of Dr. and Mrs. M. L. Wilbanks, Greenville. W. M. Dickens, vice-president, presided in the absence of T. C. Strickland, president. Thirteen physicians and two visitors were present.

H. C. Wilson, director of the Hunt County Health Unit, presented Mr. C. T. Ray from the State Health Department, who showed a sound motion picture on "The Duties of a Public Health Nurse." After the scientific program, watermelon was enjoyed by those present.

Hidalgo-Starr Counties Society

August 8, 1940

Biography of Ephriam McDoweli—A. S. Osborn, McAllen.
The Use of Sulfanilamide and Its Derivatives—Otis Walker, Mission.
Vitamin K Therapy—M. R. Lawler, Mercedes.

Hidalgo-Starr Counties Medical Society met August 8, 1940, at McAllen, with eighteen members present. The scientific program as given above was carried out.

Jefferson County Society

August 12, 1940

(Reported by W. Price Killingsworth, Secretary)

Congenital Thyroid Deficiency: Case Report; Therapy in Respiratory Allergy—Harris Hosen, Port Arthur.
An Unusual Case of Staphylococcic Empyema—H. E. Alexander, Beaumont.

Jefferson County Medical Society met August 12, at St. Mary's Hospital, Port Arthur, with fourteen members present. J. W. Long, president, presided and the scientific program was carried out as given above.

Harris Hosen reported a rare and interesting case of congenital thyroid deficiency, giving the bone studies and postmortem findings. Dr. Hosen then read a paper on therapy in respiratory allergy illustrated by lantern slides. The treatment of allergic conjunctivitis, rhinitis, sinusitis, hay fever, and asthma was concisely treated. New methods of procedure were presented with a review of older methods of treatment. Caution was urged against overtreatment in respiratory allergy, especially the employment of surgical measures for its relief.

H. E. Alexander reported a case of staphylococcic empyema in a child, which followed impetigo and a stone bruise on the foot. The patient was treated with sulfanilamide and sulfapyridine with no results but recovered quickly after drainage and the administration of sixty tablets of sulfathiazol. Brief reference was made to the case of a man with staphylococcic infection of the leg following fracture, who promptly recovered following sulfathiazol therapy.

In discussing these cases, Dr. Hosen reviewed sulfathiazol therapy and serum therapy in staphylococcic infections.

Other Proceedings.—The secretary read seven letters received from various women's organizations in Jefferson County urging the Society to investigate the possibility of establishing a full-time standard health unit to serve Port Arthur and Jefferson County instead of the present part-time agency. The matter was discussed by A. R. Autrey, Harris Hosen, J. W. Long, H. E. Alexander, W. E. Tatum and W. P. Killingsworth.

H. E. Alexander moved that a committee be appointed to thoroughly investigate the standard health unit advocated by the Texas State Board of Health, to ask the State Health Department to send a representative to discuss the matter with the committee at its meeting and to present the subject to the Society at its next regular meeting. The motion was seconded by W. E. Tatum and carried. President Long appointed the following committee: L. C. Heare, chairman, A. R. Autrey, W. D. Brown and H. E. Alexander.

New Member.—W. E. McRee, Jr., Port Arthur, was elected to membership.

Tarrant County Society

September 3, 1940

(Reported by Craig Munter, Secretary)

Some Principles of Infant Feeding—Frank H. Lancaster, Houston.
Maternal and Infant Mortality in Texas—J. M. Coleman, State Health Department, Austin.

Tarrant County Medical Society met September 3, in the Medical Arts Auditorium, Fort Worth, with fifty-seven members and nine visitors present. The scientific program as given above was carried out.

Frank H. Lancaster was introduced by E. G. Schwarz, and his paper was discussed by E. M. Wier.

J. M. Coleman was introduced by L. O. Godley, and his paper was discussed by R. L. Grogan, Burke Brewster, and L. H. Reeves.

Other Proceedings.—On motion of L. H. Reeves, the guest speakers were elected honorary members of the Tarrant County Medical Society.

Resolutions of condolence were adopted on the death of Mrs. J. E. Griffith, mother of Dr. M. A. Griffith.

New Members.—John W. A. Althaus was elected by transfer from the Lubbock-Crosby Counties Medical Society, I. L. Van Zandt from the Galveston County Medical Society, and Wayne Taylor from Angelina County Medical Society.

The secretary read a letter from the National Foundation for Infantile Paralysis, Inc., asking for the cooperation and endorsement of the Society for a joint one-day clinic for crippled children with the Crippled Children's Division of the State Department of Education. On motion of J. Haywood Davis, seconded by L. H. Reeves, the Society voted to endorse the proposed clinic.

T. C. Terrell, Councilor, announced the meeting of the Thirteenth District Medical Society in Wichita Falls, September 10.

Sim Hulsey, chairman of the clinic committee, discussed briefly plans for the fall clinic of the Society to be held September 24.

Ernest D. Rogers, chairman of the portrait and memorial committee, displayed the album of the Tarrant County Medical Society. On motion of W. R. Thompson, seconded by Nelson L. Dunn, a vote of thanks was extended to those who had prepared the album.

The attendance prize, a floor lamp, was won by C. C. Garrett. Following adjournment, refreshments were served through the courtesy of Jack Collier of the Medical Arts Drug Store.

Northwest Texas District Society

September 10, 1940

(Reported by J. Edward Johnson, President)

The Thirteenth, Northwest Texas, District Medi-

cal Society met September 10, at Wichita Falls, with 149 physicians registered, twenty of whom were visitors from surrounding districts. The scientific program consisted of a series of papers presented by nine essayists, one each from the nine component medical societies of the Thirteenth District. Dr. M. D. Levy of Houston, was the guest speaker, and in addition to a paper, "Medical Phases of Gallbladder Disease," conducted a round table discussion at the noon luncheon. The meeting broke a record in that every physician scheduled for a paper was present and read his paper on time in the order in which it was listed to appear.

The following scientific program was carried out:

Appendicitis in Childhood (E. W. Wright, Bowie).—Attention was directed to the high mortality of appendicitis in childhood and stress was laid upon certain measures necessary in its reduction. Danger of laxatives, late hospitalization, and spreading peritonitis following rupture are major considerations in the problem. Difficulties of diagnosis were pointed out and points useful in the differential diagnosis taken from the literature and the author's experience were listed. One case was reported in which an abscess, mistakenly diagnosed as dysmenorrhea elsewhere, was drained that recurred later under the observation of the same physician, with the same error repeated. Especially troublesome in the differential diagnosis are respiratory infections including pneumonia, pleurisy, and empyema; abdominal adenitis, primary peritonitis, pneumococcic salpingitis in young girls, childhood types of intestinal obstruction, and acute gastroenteritis. Surgery was urged for cases not too far advanced, and conservative measures for late and complicated cases where peritonitis and toxemia have clouded the picture.

The paper was discussed by Q. B. Lee, Wichita Falls, and Charles Harris, Fort Worth.

Abdominal Pain (Dr. E. L. Graham, Cisco).—Emphasis was placed on the urgency of abdominal pain as a symptom, no matter how obscure or confusing or how difficult might be its proper interpretation. Reference was made to examples of the difficulties in locating the source of the pain and in appraising the gravity of the lesion as is tragically illustrated by the blundering operative intervention that every physician of long experience has occasionally observed when a lesion in the chest or spinal cord has simulated the symptoms of abdominal disease, or when an abdominal pathologic lesion refers its pain to some other region of the body.

Approach to an understanding of abdominal diagnosis must be through thorough study of the following subjects that were stressed as fundamental: (1) Segmental distribution of nerves supplying the various abdominal viscera and peritoneum, any or all of which may be involved in referred pain, the higher segments often taking precedence over the lower; (2) study and accurate knowledge of the comparative pain response of different tissues to injury or stress; (3) study of the types of pain that characteristically are considered the result of injury or pathologic changes in the peritoneum, the viscera, and sensory nerve roots of the spinal cord; (4) study of the possible variations in reaction to pain of individuals of varying personality, of different physical condition states, and of bodily and mental adjustment—or the lack of it—to suffering.

Applications of some of the knowledge referred to were made to the problems in diagnosis of ruptured viscus, and attention was called to the order of sequence of the development of symptoms and the place of pain in each situation as a final helpful point.

The paper was discussed by B. B. Griffin, Graham, and J. H. McCracken, Mineral Wells.

Physician, Patient, Specialist (Roger W. Gray and H. H. Cartwright, Breckenridge).—An attempt was made to bring before the profession the extreme need for a more intelligent coöperation of the general practitioner and specialist in the common purpose of serving the sick efficiently. The family physician is and should be the "foundation of our medical structure," and, as such, is burdened with responsibility for the service that his patient receives, whether alone from his own hands or with the aid of others whom he may call to his assistance. The general practitioner should qualify himself for this responsibility by diligent study and by the constant application of his interests and attention to medical research and progress. Regions of the body in which the general physician should be qualified in diagnosis and treatment are the fundus of the eye, the chest, the heart, the abdomen, and the genitourinary system. While recognizing the trend toward specialism as growing sentiment among the laity, the inefficiences, false economies, and confusion resulting from the attempt of some specialists to receive their patients directly from the public and without any sort of reference, were pointed out. The fault that the specialist finds in the family physician who presumes to invade specialized fields without the special training required to do competent work was called to attention. The popularity of charlatans comes from improper scientific approach of regular physicians to patients with functional disease who consult them.

When to Refer Eye, Ear, Nose and Throat Patients (C. B. Williams, Mineral Wells).—Warning was sounded against expansion of the field of the family physician, by well-meaning efforts of organized medicine, to encourage general practitioners to undertake work in special fields for which they are not qualified by training. Difficulties attending diagnosis of "sinus infection" were cited as illustrating the need for special skills and techniques and as accounting for the confusion in this field when attempts are made by practitioners not specially trained to manage patients without aid of the specialist. Persistent hoarseness was mentioned as an example of an often neglected sign of serious throat disease that may result disastrously for the patient if not referred for competent study by one skilled and equipped for examination of the deep recesses of the larynx. A better state of management of ear conditions was reported, but rank carelessness and indifference was charged in the choice made by many general practitioners of a refractionist. Examples of bungling of optometrists in dealing with unrecognized cases of glaucoma were deplored, especially because of immediate danger on the one hand to the sight and of wasting opportunity for permanent protection against eventual loss of sight through delay in correcting the metabolic fault causing the condition on the other.

The presentation of Dr. Williams was discussed by Charles R. Hartsook, Wichita Falls; J. Edward Johnson, Mineral Wells, and W. G. Phillips, Fort Worth.

A Resume of the New Drug, Sulfathiazole (Robert C. Stokes, Vernon).—A resume of recent literature on the use of sulfathiazole was given. The findings of investigators regarding various essential points necessary to the employment of it by anyone not yet experienced in its use were reported, such as methods of administration, dosage, toxicity, manner of elimination, specific action, complications, and dangers. Comparisons with sulfanilamide and sulfapyridine regarding the efficiency of their several specific actions against the various organisms vulnerable to these drugs, and concerning body tol-

erance of them were made. The following significant conclusions were derived from this study: sulfathiazole is superior to sulfapyridine in its more uniform absorption, greater chemical efficiency while in the body fluids, somewhat less toxic action, less danger of crystallizing in the kidney, and more effective action against staphylococci. Compared with sulfapyridine, it is equally effective against pneumococcus and more effective than sulfapyridine against staphylococcus. It is, however, not suited to any form of meningitis because of poor diffusion from the blood to spinal fluid.

The paper of Dr. Stokes was discussed by Will S. Horn, Fort Worth, and Otto J. Juhl, Vernon.

THE ROENTGEN DIAGNOSIS IN GASTRIC LESIONS (C. A. Wilcox, Wichita Falls).—Some of the difficulties facing the roentgenologist in diagnosing stomach conditions were outlined. Cases were divided into intrinsic or organic and extrinsic or reflex-functional conditions for convenience of study. Special attention was given to the peculiar features and difficulties met with in attempts to diagnose ulcer of the stomach or duodenum, carcinoma of the stomach, polyposis, phytobezoars, non-malignant tumors of the stomach, and diaphragmatic hernia of the cardia. The author mentioned the old argument over the question of whether the radiologist should consider clinical diagnosis or knowledge in appraisal of x-ray findings and frankly stated his own position as favoring the combination of other knowledge with the x-ray findings, provided the roentgenologist avoids becoming a "yes man" through improper bias from clinical impressions.

The paper was discussed by E. V. Powell, Fort Worth.

MEDICAL PHASES OF GALLBLADDER DISEASE (Moise D. Levy, Houston).

ROLE OF SURGERY IN THE TREATMENT OF PEPTIC ULCER (Harold J. Shelley, Fort Worth).—The discussion was limited to gastro-duodenal, marginal jejunal, and the occasional ectopic gastric mucosal ulceration in Meckel's diverticulum. Indications for surgery were stated pointedly as confined to the medically treated failures and complicated cases which are unsuited to medical management alone. Stress was placed on the importance of coöperation of the patient in success, and warning sounded against resort to surgery for medical failure due to lack of coöperation on the part of the patient. Surgical treatment applied either to the medical failures or the strictly surgical case is not substituted for medical treatment but is offered only as an adjunct to the medical management that must accompany and follow it. Choices of operative techniques for various complications were discussed somewhat, with comment on the relative importance of each for its own best application. Suggestions relative to solution of problems arising in perforation, pyloric stenosis, hemorrhage, and marginal ulceration were given.

PERFORATED ULCER (E. P. Bunkley, Stamford).—(Discussed by Jack Daly, Fort Worth).

PUERPERAL INFECTION (Paul Connor, Jacksboro).—The causative organisms in these infections were reviewed and attention was called to the faulty management or technique responsible for their introduction into the given case. Emphasis was placed on infections from the respiratory tract of the doctor or attendants. Prophylaxis is the most important step in the control; this is to be carried on throughout the prenatal period and puerperium, with avoidance of shock from pain and exhaustion, the judicious use of episiotomy and the conservative employment of radical interference—all important factors. Treatment of cases remains the same as to method, except for the use of sulfanilamide and related chemotherapeutic agents that are now to be employed according to indications.

The paper was discussed by J. A. Heyman, Wichita Falls, and Frank Schoonover and W. G. Phillips, Fort Worth.

Officers.—At the business session, the following officers were elected for the ensuing year: President, J. Edward Johnson, Mineral Wells; vice-president, Robert C. Stokes, Vernon; and secretary-treasurer, Charles H. McCollum, Jr., Fort Worth.

Bowie was selected as the next place of meeting, which will be held March 11, 1941.

CHANGES OF ADDRESS

Dr. H. M. Anderson, from Sanatorium to San Angelo.

Dr. Stewart H. Auerbach, from Jacksonville to Augusta, Georgia.

Dr. Wm. C. Bascom, from Rochester, Minnesota, to St. Paul, Minnesota.

Dr. James H. Bennett, from Galveston to Cincinnati, Ohio.

Dr. Ruth B. Bennett, from Galveston to Cincinnati, Ohio.

Dr. Raymond S. Borsheim, from San Antonio to Davenport, Iowa.

Dr. J. C. Cain, from Galveston to Rochester, Minnesota.

Dr. James H. Campbell, from Linden to Shreveport, Louisiana.

Dr. C. C. Cogburn, from Eastland to Nixon.

Dr. C. H. Crawford, from Thorndale to Bartlett.

Dr. J. R. Dale, from Corrigan to Diboll.

Dr. Kurt Lekisch, from Temple to Midland.

Dr. W. J. Poshataske, from Marlin to Silsbee.

Dr. John W. Ray, from Timpson to Laguna, New Mexico.

Dr. Felton R. Roach, from Jefferson to Queen City.

Dr. Eugene W. Secord, from El Paso to Detroit, Michigan.

Dr. S. L. Wadley, from Palmer to Royse City.

Dr. Alvin Waller, from Commerce to Woodville.

Dr. F. S. White, from San Antonio to Terrell.

Dr. Joe R. Gandy, from Houston to Philadelphia, Pennsylvania.

Dr. W. K. Green, from Baytown to Houston.

Dr. T. M. Oliver, from Waco to Fort Sam Houston.

Dr. L. F. Preston, from Abilene to Dublin.

AUXILIARY NOTES

Officers of the Woman's Auxiliary to the State Medical Association of Texas: President, Mrs. William Hibbitts, Texarkana; honorary life president, Mrs. A. C. Scott, Sr., Temple; president-elect, Mrs. S. F. Harrington, Dallas; first vice-president, Mrs. H. Leslie Moore, Dallas; second vice-president, Mrs. A. E. Moon, Temple; third vice-president, Mrs. A. B. Pumphrey, Fort Worth; fourth vice-president, Mrs. Joe B. Foster, Houston; recording secretary, Mrs. Walter A. Minsch, Kerrville; publicity secretary, Mrs. W. F. Armstrong, Fort Worth; treasurer, Mrs. J. Frank Clark, Abilene; parliamentarian, Mrs. J. W. Tottenham, Brownwood; and corresponding secretary, Mrs. Ralph Cross, Texarkana.

STATE EXECUTIVE BOARD MEETING

The Executive Board of the Woman's Auxiliary to the State Medical Association met September 10, 1940, at the Hotel Texas, with Mrs. William Hibbitts, president, as hostess. Mrs. Hibbitts presided over the business session.

The invocation was given by Mrs. John T. Moore, Houston.

Greetings were extended by Mrs. William Hibbitts, and a short address of welcome was given by Mrs. J. S. McVeigh, Fort Worth, president of Tarrant County Auxiliary.

The following members of the Board were present: Officers—Mesdames William Hibbitts, Texarkana; S. F. Harrington, Dallas; H. Leslie Moore, Dallas; A. E. Moon, Temple; A. B. Pumphrey, Fort Worth; J. B. Foster, Houston; Walter A. Minsch, Kerrville; Ralph Cross, Texarkana; J. Frank Clark, Abilene; W. F. Armstrong, Fort Worth. Committee members

—Mesdames H. S. Renshaw, Fort Worth; L. S. Thompson, Dallas; F. F. Kirby, Waco; Frank Haggard, San Antonio; M. L. Graves, Houston; John T. Moore, Houston; P. R. Denman, Houston; D. F. Kerbow, Paris; W. J. Johnson, San Antonio; J. H. Marshall, Dallas; H. R. Dudgeon, Waco; Henry Trigg, Fort Worth; O. M. Marchman, Dallas; E. C. Ferguson, Beaumont; H. R. Dudgeon, Jr., Waco; C. O. Terrell, Fort Worth; C. H. Brooks, Waco. Council Women — Mesdames J. M. Hogan, Big Spring; Charles Bailey, Ballinger; Wm. L. Secor, Kerrville; T. D. Vaughn, Bertram; J. K. Webster, Athens; Evelyn Rice Hutchins, Marlin; A. L. Borchardt, Vernon; C. E. Willingham, Tyler. Past presidents—Mesdames M. L. Graves, Houston; H. B. Trigg, Fort Worth; O. M. Marchman, Dallas; H. R. Dudgeon, Waco; F. N. Haggard, San Antonio; John T. Moore, Houston; F. F. Kirby, Waco; S. H. Watson, Waxahachie. Guests—Mesdames J. F. McVeigh, Fort Worth, and J. H. Wootters, Houston.

Letters of resignation from Mrs. S. C. Applewhite, San Antonio, and Mrs. E. W. Coyle, San Antonio, were read. The Board accepted these resignations with regret.

Mrs. Hibbitts then announced changes made in the Executive Board due to the resignation of Mrs. Applewhite. They are: Mrs. Ralph Cross, Texarkana, to replace Mrs. E. W. Coyle, as corresponding secretary; Mrs. H. Leslie Moore, Dallas, to serve as first vice-president, and chairman of organization.

Mrs. S. F. Harrington, Dallas, President-elect of the State Auxiliary, brought greetings.

Reports and recommendations from officers, chairmen of standing committees, council women and district presidents were read.

The executive board voted to add the sum of $25.00 to the budget for expenses of the public relations chairman.

Mrs. J. B. Foster, Houston, program chairman, spoke on the Essay Contest, and explained that the contest for 1939-1940 was open to all high school students, but since there was such a wide range of ages in all four grades to be considered in judging the essays Mrs. Foster suggested that the contest be offered to only one grade. The Board voted to offer the essay contest this year to the tenth grade only.

The Executive Board voted to recommend to the State Medical Association that the annual complimentary luncheon given the Auxiliary at the State meeting be made a "no-host" affair (each person attending the luncheon paying for her plate), and that the money allowed by the State Medical Association for this luncheon be given, if possible, to the Memorial Fund of the Woman's Auxiliary.

Ways and means of limiting the time of the general session at the State meeting was discussed. On motion of Mrs. P. R. Denman of Houston, it was voted to divide the general business meeting into two sessions, with officer's reports, reports of standing committee chairmen and the Executive Board Luncheon on one day, starting the morning session the next day with the reports of presidents of county auxiliaries.

Mrs. H. Leslie Moore, Organization Chairman, reported two new organizations since the State meeting in May: Pecos-Brewster-Jeff Davis-Presidio Counties Auxiliary in District One, with Mrs. L. A. Lavanture, Marfa, president; Fisher-Nolan-Mitchell Counties Auxiliary in District Two, with Mrs. J. H. Richardson, Sweetwater, president.

On motion of Mrs. L. S. Thompson, Dallas, it was voted that a mimeographed form be sent to all county presidents by the State Recording Secretary to facilitate making the annual county reports more uniform and less lengthy. Mrs. Walter A. Minsch, Kerrville, was appointed chairman of a committee to work out details of this report, and Mrs. W. J. Johnson, San Antonio, and Mrs. S. F. Harrington, Dallas, were appointed to assist Mrs. Minsch.

Mrs. Hibbitts announced that Mrs. F. F. Kirby, Waco, had been appointed chairman of the *Bulletin* Committee. Mrs. Kirby urged each member to subscribe to the *Bulletin*, the official organ of the Woman's Auxiliary to the American Medical Association.

Mrs. S. H. Watson, Waxahachie, brought reports of the proceedings at the American Medical Association Auxiliary meeting in New York in May.

The business session adjourned at noon for luncheon with Mrs. William Hibbitts as hostess, at which time Drs. Preston Hunt, Texarkana, and Holman Taylor, Fort Worth, President and Secretary respectively, of the State Medical Association; Dr. R. B. Anderson, Fort Worth, Assistant Secretary of the State Medical Association, and Dr. L. B. Jackson, San Antonio, Chairman of the Advisory Committee of the Woman's Auxiliary, were the guest speakers.

Mrs. Hibbitts was given a rising vote of thanks for the delightful courtesies extended the Executive Board during the meeting in Fort Worth.*—Mrs. Walter A. Minsch, Recording Secretary.

AUXILIARY NEWS

Big Bend Counties Auxiliary (Pecos-Jeff Davis-Presidio-Brewster) was organized August 13, at Marfa, with the assistance of Mrs. Ralph Homan, El Paso, council woman for District 1.

The following officers were elected: President, Mrs. L. A. Lavanture, Marfa; recording and corresponding secretary, Mrs. J. C. Darracott, Marfa, and treasurer, Mrs. Joel Wright, Alpine.

Members of the new Auxiliary are: Mesdames J. H. Blackwell, J. M. Salyers, J. H. Reynolds and J. W. Helton, Fort D. A. Russell; F. E. O'Neill, Sanderson; Joel Wright, Alpine; Carrol Johnson, L. A. Lavanture and J. C. Darracott, Marfa.

The Auxiliary will hold its next meeting at the same time and place of the meeting of the Big Bend Counties Medical Society.—Mrs. J. C. Darracott.

Hidalgo-Starr Counties Auxiliary held its regular meeting August 8, 1940, at the Casa de Palmas Hotel, McAllen. After dinner with members of the County Medical Society, the Auxiliary met in separate session in the Spanish Room. Mrs. G. Van Amber Brown, president, presided.

Mrs. L. M. Southwick, Edinburg, presented a paper on "The Conquest of Pain."

Mrs. A. S. Osborne introduced the guest of the evening, Mrs. Paul Vickers, McAllen, who presented readings and character sketches.—Mrs. L. M. Southwick.

Tom Green-Eight County Auxiliary held its first meeting of the fall September 9, at the Massie Clubhouse, San Angelo, with Mrs. Robert M. Finks, Mrs. Victor E. Schulze, and Mrs. Jerome H. Smith as hostesses. Thirteen members and two guests were present. Mrs. W. Grady Mitchell, president, presided and outlined objectives for the coming year.

Mrs. Charles R. Potts distributed yearbooks to all members. Mrs. J. Valton Sessums gave the annual treasurer's report. It was voted to raise the yearly dues. It was also voted to sponsor the essay contest again this year.

President's Day was observed, and Mrs. Mitchell spoke on "An Auxiliary Member Should Know."

Mrs. W. H. Schleyer, district parliamentarian for the Texas Congress of Parents and Teachers, directed a parliamentary drill.

Mrs. Joe G. Rushton and Mrs. H. M. Anderson were guests, and Mrs. Anderson was elected to membership. A social hour followed.—Mrs. Lewis K. Tester.

*Secretary's Note: Of necessity the minutes have been abbreviated. The original copy is on file in the Minute Book of the Recording Secretary.

Northwest Texas (Thirteenth) District Auxiliary met September 10, at the Kemp Hotel, Wichita Falls, with Mrs. T. G. Rogers, Decatur, president, presiding.

Mrs. B. W. Dorbandt, Wichita Falls, gave the address of welcome, which was responded to by Mrs. E. W. Wright, Bowie.

Dr. W. G. Phillips, Fort Worth, delivered an address at the noon luncheon on the subject, "Woman's Place."

Members of the District Auxiliary were guests of the Wichita County Auxiliary at the luncheon. Three new members were presented.—Mrs. T. G. Rogers.

Mrs. Perry R. Jeter, Childress, died September 2, in a Childress hospital of injuries received in an automobile collision near Childress September 1. Dr. Jeter was injured in the fatal accident.

BOOK NOTES

[1]**Principles of Hematology.** With 104 Illustrative Cases and 167 Illustrations Including 173 Original Photomicrographs and 100 Original Charts and Drawings. By Russell L. Haden, M. A., M. D., Chief of the Medical Division of the Cleveland Clinic, Cleveland, Ohio; Formerly Professor of Experimental Medicine in the University of Kansas School of Medicine, Kansas City, Kansas. Second edition, thoroughly revised. Cloth, 353 pages. Price, $4.50. Lea & Febiger, Philadelphia, 1940.

Dr. Haden's Principles of Hematology fills the need for a presentation of the newer aspects of hematology in a concise and readable form. It can be recommended especially to the general practitioner who wants an effective and practical plan for the diagnosis of blood dyscrasias rather than a confusing discussion of conflicting theories of cell origin and other controversial phases of hematology.

The section on anemia should be of particular value since it gives a definite and systematic approach to diagnosis which is well integrated with an earlier discussion of the erythropoietic system and an excellent following presentation of treatment.

Dr. Haden's mechanized diagrams of the physiology of anemias are ingenious and will be appreciated by those who desire an explanation of a given type of anemia at a glance.

The photomicrographs, though excellent as black and white prints, would have been much better in color. It is to be regretted that the advantages of color photography are not yet generally available to scientific books and journals, particularly in this case where Dr. Haden has originals in natural color.

[2]**Electrocardiography.** By Chauncey C. Maher, B. S., M. D. Assistant Professor of Medicine, Northwestern University and the Montgomery Ward Medical Clinics; Attending Internist and Chairman of Department of Medicine at the Cook County Hospital, Chicago, Illinois, and Paul H. Wosika, M. D., M. S. Instructor in Medicine, Northwestern University and the Montgomery Ward Medical Clinics; Attending Physician at Passavant Memorial Hospital; Associate in Medicine at the Cook County Hospital, Chicago, Illinois. Cloth, 298 pages. Third Edition. Price, $4.00. A. William Wood Book. The Williams & Wilkins Company, Baltimore, 1940.

The authors in their monograph on electrocardiography have condensed the essential facts concerning their subject in a concise and simplified manner. The outline of procedure includes the basic physiology of the conduction system with the application of the electrocardiographic study to the various forms of heart disease.

Perhaps the most commendable feature of the treatise is that all cases are presented with a concise diagnosis from the electrographic standpoint to confirm exactly with the "Nomenclature and Criteria for the Diagnosis of Heart Disease," as recognized by the American Heart Association. Most of the cuts not only include Lead IV F but also have a diagrammatic illustration of the heart to further explain the disturbed physiology.

Inasmuch as the text has been thoroughly revised to include the more recent ideas concerning the standardization of the electrocardiographic leads it is quite complete.

Although the authors primarily intended this as a treatise for the student exclusive of the electrocardiologist it may be recommended as a useful reference for those interested in this field.

[3]**Frank Howard Lahey Birthday Volume.** By various authors. Cloth, 466 pages. Charles C. Thomas, Springfield, Illinois, 1940.

In the dedication of the Frank Howard Lahey Birthday Volume—a book beautifully bound, pleasingly printed and generally attractive, Frank Lahey is credited with having achieved immortality in his success-crowned career of sixty years. Too often the enthusiastic opinions of sincere friends are not confirmed by the verdicts of history. Such will not be the case in the present instance. No surgeon of the present generation deserves surgical immortality more than does Dr. Lahey.

This volume is published by his friends in appreciation of what Dr. Lahey has achieved and in expectation of what he will yet achieve, just as similar dedicatory volumes have been published in honor of Murphy, Osler, Welch, Cushing and others. A review of such a book as this is different inasmuch as it comprises fifty-one articles, by sixty-two authors, written on widely divergent subjects. The subject matter varies from "Mental Laundries" and "Chemistry and Surgery" to "Subtotal Gastrectomy for Chronic Ulcer" and "Strictures of the Common and Hepatic Bile Ducts." The authors range from San Francisco to Boston: Arthur W. Allen, Walter C. Alvarez, Donald C. Balfour, George W. Crile, W. D. Gatch, Evarts A. Graham, Fred W. Rankin, Ray Lyman Wilbur and many others.

Dr. Lahey has done noteworthy work in many fields of surgery. Notable are his contributions to our knowledge of the surgical diseases of the thyroid gland and abdomen. It is fitting, then, that this Birthday Volume should include eight articles on the thyroid, twenty-two on the stomach, intestines and colon, and four on the gallbladder and its ducts.

Without setting out names or subjects, it should be emphasized that some of the best articles of the book are by young men of yet unknown reputations. When a man of established standing writes—even though he be careless or repetitious, the medical reader is likely to be uncritical—the name alone suffices. The young man must write with accuracy and assurance.

In a book of such beautiful format and such commendable content, evidence of inactive editing or proofreading is incongruous. Examples: "sequella" for "sequelae" on page 54, "the" for "that" on page 94, and "lig-lag" for "lid-lag" on page 170. But such slight dispraise is incidental. The book is a worthy honor to a worthy man. Dr. Lahey is an exemplary product of modern medicine. His record is one answer to those meddlesome office-holders

[1]Reviewed by J. M. Hill, M. D., Dallas, Texas.
[2]Reviewed by John A. Alvarez, M. D., Houston, Texas.
[3]Reviewed by P. I. Nixon, M. D., San Antonio, Texas.

who would change the way of medical things. His appeal to the individual patient is comparable to that of the general practitioner of a past generation, so aptly depicted in Francis Brett Young's, Dr. Bradley Remembers. But Dr. Bradley appropriately remained in the ranks. Dr. Lahey properly became president of the American Medical Association.

[4]**Chemotherapy and Serum Therapy of Pneumonia.** By Frederick T. Lord, M. D. Clinical Professor of Medicine, Emeritus, Harvard Medical School; Member of the Board of Consultation, Massachusetts General Hospital. Cloth, 150 pages. Price, $1.00. The Commonwealth Fund, New York, 1940.

This book, the third in a series of handbooks on pneumonia published by the Commonwealth Fund based on results of the Massachusetts Pneumonia Study and Service, proposes for the use of physicians in general practice a brief and complete discussion of advances in pneumonia therapy, chemotherapy, horse and rabbit antiserum therapy and combined use of sulfapyridine and antiserum.

The authors have fulfilled their purpose well, but many physicians in general practice with meager technical facilities will find parts unintended for them, and may feel the statistics heavy for the size of the book. The importance of the blood level concentration of sulfapyridine appears over-emphasized considering the technical facilities of many general practitioners in view of the lack of correlation of blood sulfapyridine concentration and results obtained, and the difficulty of specific blood level maintenance; further, clinical evidence of relationship between high blood concentration of sulfapyridine with toxic drug effects is meager. The authors recommend that sputum specimens be prevented from drying and that they be kept cold in transit from patient to laboratory if there is delay; the physician in general practice will find it expedient to dry the sputum on slides and the laboratory technician will discover that the typing of pneumococci is facilitated by the use of small dry specimens. Criticism of the intravenous route of sulfapyridine administration is justified, but the practitioner will have need for parenteral administration on occasions, and it is unfortunate that the subcutaneous route of sodium sulfapyridine administration has escaped the attention of the authors. Although the handbook is replete with evidence substantiating the value of the leukocyte count as a guide to continuance or discontinuous of chemotherapy, the use of the leukocyte count for this purpose is unemphasized. Much additional experience is urgently needed to "complete" the subject of the combined use of antiserum and sulfapyridine.

The handbook will recommend itself to the majority of physicians who treat pneumonia, as the most authoritative, compact source of information on the subject available.

New and Nonofficial Remedies, 1940, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1940. Cloth. Price, postpaid, $1.50. pp. 656-LXVIII. Chicago: American Medical Association, 1940.

Each year a revised list of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association as of January 1 is published in book form under the title of "New and Nonofficial Remedies." The book contains the descriptions of acceptable proprietary substances and their preparations, proprietary mixtures if they have originality or other important qualities, important nonproprietary nonofficial articles, simple pharmaceutical preparations, and other articles which require retention in the book.

A list of articles and brands accepted by the Council, but not described, is included in the book to cover simple preparations or mixtures of official articles (U. S. P. or N. F.) marketed under descriptive, nonproprietary names for which only established claims are made. Diagnostic reagents which are not used in or on the human body, and protein diagnostic preparations are not included in New and Nonofficial Remedies unless the determination of the status of these products by the Council has been requested by the distributor. If such products are found to be marketed in accordance with the Council's rules, they may be included in the list of undescribed, but acceptable articles.

New and Nonofficial Remedies is a practical and condensed text of pharmacology and therapeutics; it contains scientifically elaborated standards for all accepted nonofficial drugs; its Index to Distributors is a list of manufacturers, a large number of whose products have met the Council's high standards; its Bibliographical Index is a storehouse of references to reports which have been made mainly on unaccepted and unacceptable drugs; its prefatory material contains the Council's "Rules," a time-tested and reliable test of basic principles for the furtherance of scientific and rational medicine.

A supplement to the annual volume of New and Nonofficial Remedies is published twice a year to bring up to date such current revisions and additions as have been necessary since its last publication. Every product included in the book is subject to the official rules of the Council. The comments to rules are changed occasionally by way of clarifying interpretation to insure fair consideration of all submitted preparations as new standards are recognized. Such constant and critical consideration of its contents provides the physician with a valuable reference list of acceptable new preparations on which to base his selection for use in treatment according to the established current practices of the profession.

The 1940 New and Nonofficial Remedies, of course, contains the revisions which appeared in the supplements for the 1939 edition, and continues the plan of grouping together articles having similar composition or action under a general discussion. These discussions have undergone considerable revision in the 1940 edition. Further revision of statements regarding the actions, uses, dosage, composition, purity, identity, strength or physical properties of many of the articles has also been necessary in some cases. Noteworthy revisions are those of the chapter on Liver and Stomach Preparations, radically rewritten and including a statement of requirements suggested by findings of the Anti-Anemia Preparations Advisory Board of the U. S. Pharmacopeia; the subsection Tuberculins, entirely rewritten to conform to newer knowledge in this field; and the chapter Allergenic Protein Preparations, the name of which has been changed to Allergenic Preparations. Minor but relatively important revisions are found in the articles: Bismuth Compounds, Serums and Vaccines, and Vitamins and Vitamin Preparations for Prophylactic and Therapeutic Use.

The indices of the new volume of New and Nonofficial Remedies are of the same order and plan as in previous editions. A general index lists accepted articles, including those not described. This is followed by an index to distributors in which appear all the Council accepted articles listed under their respective manufacturers. Finally, a bibliographical index is added for listing proprietary and unofficial

[4]Reviewed by Victor E. Schulze, M. D., San Angelo, Texas.

articles not included in N. N. R. This includes references to the Council publications concerning each such article as has appeared in *The Journal of the A. M. A.*, Reports of the Council on Pharmacy and Chemistry, Propaganda for Reform, Vol. 1 and 2, or Reports of the A. M. A. Chemical Laboratory.

[5]**Minor Surgery.** By Frederick Christopher, S. B., M. D., F. A. C. S. Associate Professor of Surgery at the Northwestern University Medical School, Chicago; Chief Surgeon at the Evanston (Ill.) Hospital. With a foreword by Allen B. Kanavel, M. D., F. A. C. S. Fourth Edition, reset. 990 pages with 639 illustrations. Philadelphia and London: W. B. Saunders Company, 1940. Cloth, $10.00.

This book considers many important surgical conditions which are of a major character. Dr. Christopher's individual descriptions, opinions and treatments are excellent. In addition, on almost every page in small type, he gives verbatim reports or abstracts of the literature upon the subject under discussion. At the foot of each page there is an extensive bibliography covering that page. This arrangement of the text covers an immense amount of literature.

In the discussion of infected wounds attention is directed to the use of a number of new chemicals and to the influence of vitamins on wound healing. The use of sulfanilamide locally in compound fractures is discussed, and in relationship to cellulitis, erysipelas and other surgical conditions. A number of therapeutic agents are listed under the treatment of each surgical condition. The chapters on circulatory disturbances and gangrene and on injuries to the extremities are splendid. The surgical interne is given much good advice. The technique of minor surgery is carefully described.

This book is really good.

DEATHS

Dr. Lawrence R. Harris of Galveston, Texas, died August 6, 1940, at his home, of coronary occlusion.

Dr. Harris was born December 25, 1881, in Galveston, Texas, the son of Charles A. and Emma J. Harris. His academic education was received in the Sacred Heart Academy and St. Mary's University at Galveston, and his medical education was obtained in the Medical Department of the University of Texas, at Galveston, from which he was graduated in 1907. He then went to Mexia, Texas, and practiced for one year. In 1908, he returned to Galveston where he had been practicing for thirty-two years. He was an ethical and highly respected physician, and his passing is a loss to his community.

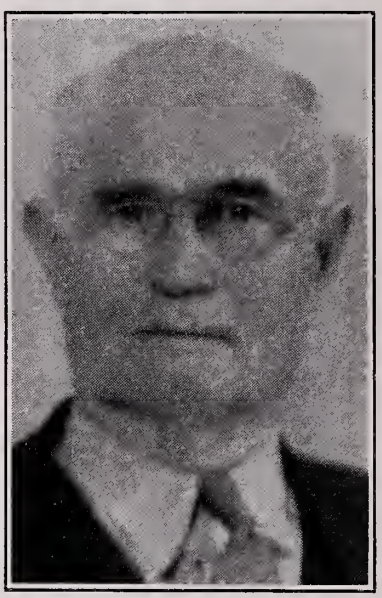
DR. LAWRENCE R. HARRIS

Dr. Harris had been a member of the Galveston County Medical Society, State Medical Association and American Medical Association for thirty-one years. He was a member of the Sacred Heart Church, Catholic Knights of America, and Past Faithful Navigator of Monsignor Kirwin Assembly No. 787, Knights of Columbus.

Dr. Harris is survived by his wife, the former Miss Frances Pearl Slaughter, to whom he was married May 8, 1912, in Temple, Texas. He is also survived by one brother, Leroy C. Harris, Dallas, Texas, and four sisters, Mrs. Viola Plummer, Smith Point, Texas; Mrs. W. A. Shields, Sacramento, New Mexico; Misses Mabel C. Harris and Ruth A. Harris, both of Galveston.

Dr. Watt O. McDaniel of Streetman, Texas, died August 16, 1940, at his home, of carcinoma.

Dr. McDaniel was born October 5, 1872, in Oakville, Alabama, the son of E. N. and Ann McDaniel. His preliminary education was received in the public schools of his community and his medical education was obtained in the old Fort Worth Medical College and the Gate City Medical College, Texarkana, Arkansas, from which latter institution he was graduated in 1905. He had taken post-graduate work in Tulane University, New Orleans. He served an internship in St. Joseph's Hospital, Fort Worth, Texas. Dr. McDaniel had practiced at Gleam, Winkler, and McDade, prior to his final location in Streetman, where he had lived and practiced for many years. He was a beloved physician and citizen of Streetman, which community he had long and faithfully served.



DR. W. O. McDANIEL

Dr. McDaniel had been a member of the State Medical Association and American Medical Association since 1908 through the county medical societies of his various places of residence. During the World War he was stationed a short period of time at Camp Bowie, Fort Worth, Texas. He was a member of the Baptist Church and a Mason.

Dr. McDaniel is survived by his wife, the former Miss Alice Cowart, to whom he was married June 20, 1894. He is also survived by one son, Vivian McDaniel, Tyler; four daughters, Mrs. T. P. Brewer and Mrs. S. A. Clark, Fort Worth, and Mrs. Malcolm Alstin and Mrs. Lish Roberts, Streetman; two sisters, Mrs. Charlie Hawthorne, Streetman, and Mrs. S. A. James, Eagle Mills, Arkansas; and two brothers, E. N. McDaniel and Pruitt McDaniel, both of Streetman.

[5]Reviewed by Elbert Dunlap, M. D., Dallas, Texas.

Dr. Everett Jones of Wichita Falls, Texas, died July 15, 1940, in Hollywood, California, of heart disease.

Dr. Jones was born January 15, 1884, in Whitesboro, Texas. His academic education was received in Texas Christian University, Fort Worth, from which he received a B. A. degree in 1904. He then attended the Medical Department of the University of Texas, Galveston, from which he was graduated in 1908. Following his graduation he served an internship in the John Sealy Hospital, Galveston. He began the practice of medicine in Wichita Falls in 1910, and was actively engaged in the practice of medicine and surgery until 1917. Shortly after the United States entered the war, Dr. Jones was commissioned a major in the Medical Corps and instructed to organize a medical detachment in Wichita Falls. In October, 1917, he was ordered to Camp Bowie. Just before the division went overseas, he was transferred to a field hospital. From there he was ordered to France. Shortly after reaching France, he was made chief surgeon of Operating Team 568. With this team he did intensive work in the following offensives: Chaumont, Chateau Thierry, Aisne-Marne, Oise-Aisne, St. Mihiel and Muse-Argonne, rendering distinguished service in Evacuation Hospitals five and six.

DR. EVERETT JONES

After the war Dr. Jones returned to Wichita Falls, where he became associated with Dr. Q. B. Lee and Dr. O. B. Kiel as co-founder of the Wichita Falls Medical and Surgical Clinic. This group opened the Wichita Falls Clinic-Hospital, February 11, 1926. Dr. Jones had been in the active practice of surgery until he suffered a heart attack about one year ago. Since that time he had limited his professional work, discontinuing surgery and assuming more of the administrative duties of the clinic and hospital.

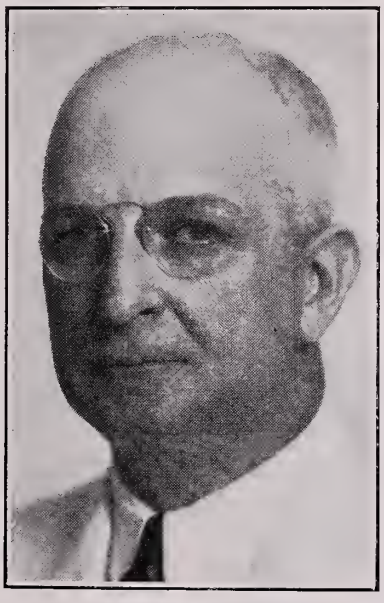
Dr. Jones was a member of the State Medical Association, and American Medical Association, first through the Galveston County Medical Society and, after his removal to Wichita Falls, through the Wichita County Medical Society, for thirty years. He was a past president of his county medical society and the Northwest Texas District Medical Society. He served the State Medical Association as secretary of the Section on Obstetrics and Gynecology in 1913, and again as chairman of this section in 1924. He was president of the Texas Surgical Society at the time of his death. He held a life membership in the American College of Surgeons and last year was honored as a member of the founders' group of the American Board of Surgery. He was a member of the Texas Railway and Traumatic Surgeons Association. His skill and knowledged in surgery were widely recognized. He had served the Fort Worth and Denver Railroad as surgeon throughout his years of practice in Wichita Falls and was its division surgeon at the time of his death.

In addition to his professional services to his community, he had also been a leader in its civic life. He served as director of the Chamber of Commerce from 1931 to 1933, at which time he was elected president, and again as a member of the board of directors from 1938 until his death. His hobby was baseball. He was a member of the Presbyterian Church, a Scottish Rite Mason, and a member of the Shrine.

Dr. Jones is survived by his wife, the former Miss Jenny Henry of Lancaster, to whom he was married in 1911. His death was a distinct loss to Wichita Falls and northwest Texas. He was a distinguished surgeon and a valuable citizen.

Dr. Sidney Israel of Houston, Texas, died July 17, 1940, at his home, of coronary occlusion.

Dr. Israel was born October 11, 1886, in New Orleans, Louisiana, the son of Paul and Helen (Harper) Israel. His academic education was received in the schools of that city. His medical education was obtained in the Tulane University School of Medicine, New Orleans, from which he was graduated in 1908. He served an internship in Charity Hospital, New Orleans. He then became associated with the staff of a Temple hospital. Dr. Israel began the practice of medicine as a radiologist, but very soon became interested in ophthalmology and otolaryngology and took postgraduate work in that specialty in New York City. He then returned to Houston, where he had been in the active practice of his specialty until his death.



DR. SIDNEY ISRAEL

Dr. Israel was a member of the State Medical Association and American Medical Association, continuously in good standing from 1912 until his death, through the Bell County Medical Society while residing in Temple and the Harris County Medical Society after his removal to Houston. He was a member of the South Texas District Medical Society, the Southern Medical Association, the American Academy of Ophthalmology and Otolaryngology, the American Larnygological, Rhinological and Otological Society and the American Board of Otolaryngology. He was an honorary member of the Kansas City Laryngological, Rhinological and Otological Society, and a member of the Society of American Medical Authors and

Editors. Dr. Israel served as the first secretary of the staff of the Jefferson Davis Hospital, which institution he had also served as a member of the board of directors for two years. He was for many years a member of the board of directors of the Houston Tuberculosis Hospital and was serving in this capacity at the time of his death. He had also served as a member of the staffs of St. Joseph's Hospital, the Southern Methodist Infirmary and the Memorial Hospital, Dr. Israel was a skilled bronchoscopist and had invented improvements on bronchoscopic instruments. He had also perfected a bone drill, announcement of which was to have been made shortly. He was a prolific and capable writer, having made numerous valuable contributions to medical literature in his specialty. His hobby was photography in which he was expert. He had employed his hobby to advantage in medicine. Dr. Israel was also particularly interested in anesthesia as applied to his specialty and had done important research work in this field. His death cut short a life of usefulness.

Dr. Israel is survived by his wife, the former Miss Mildred Miller of Houston, Texas, to whom he was married September 1, 1934, in Jennings, La. He is also survived by two sons, Sidney Israel, Jr., and Charles Israel, both of Houston.

Dr. John T. Guynes of Jourdanton, died suddenly July 21, 1940, at his home, of coronary occlusion.

Dr. Guynes was born October 13, 1883, in Braxton, Mississippi, the son of A. B. and Media Guynes. His preliminary education was received in the schools of Braxton and the Mississippi College, Jackson, Mississippi. His medical education was obtained in the University of Tennessee School of Medicine, Memphis, Tennessee, from which he was graduated in 1914. He began the practice of medicine in Mississippi. In 1918 he moved to Pleasanton, Texas, where he remained one year. He then moved to Jourdanton, Texas, which was his home for the remainder of his professional life. He was held in high regard by his medical associates and was loved and respected by all who knew him. His untimely death was a distinct loss to his community.

DR. JOHN T. GUYNES

Dr. Guynes was a member in good standing of the State Medical Association and American Medical Association from 1918 until his death, first through the La Salle-Frio-Dimmit Counties Medical Society and later through the Atascosa County Medical Society. He had served his county medical society as president from 1932 through 1936. For a number of years he had been health officer of Atascosa County, and a few days before his death had accepted the appointment of city health officer for Jourdanton. He had also been local surgeon for the Missouri Pacific Railway Company for many years. He was a member of the Baptist Church, a thirty-second degree Scottish Rite Mason, and a member of the Shrine. He took an active part in the civic and political life of his community. He had ranching interests in Atascosa and McMullen Counties. His chief hobby was wolf hunting and he was a member of the Southwest Texas Wolf Hunters' Association.

Dr. Guynes was married in Mississippi in 1917 to Miss Ida Holley. On February 26, 1938, he was married to Mrs. Yolanda Burris Roberts, who survives him. He is also survived by his mother, Mrs. A. B. Guynes, Lytle, Texas; a brother, R. S. Guynes, Poteet, Texas; and two sisters, Mrs. R. B. Touchstone, Lytle, Texas, and Mrs. J. C. Jones, Scooba, Mississippi.

Dr. Charles U. Patterson, Houston, Texas, died June 6, 1940, in a Houston hospital, of coronary thrombosis.

Dr. Patterson was born February 29, 1864, near Barnesville, Ohio, the son of Jesse and Tobitha Patterson. His preliminary education was received in the schools of his community. His medical education was obtained in the Kentucky School of Medicine, Louisville, Kentucky, from which he was graduated in 1892. He began the practice of medicine at Morristown, Ohio. In 1893 he moved to Uhrichsville, Ohio, where he practiced until 1912. He then moved to Houston, Texas, where he had been in the active practice of the specialty of internal medicine until his death. He was one of the first, if not the first physician in Houston to limit his practice to internal medicine.

DR. CHARLES U. PATTERSON

Dr. Patterson was a member for many years of the Harris County Medical Society, State Medical Association and American Medical Association. He was a past president of his county medical society. He was also a member and past president of the Houston Academy of Medicine, and one of the organizers of the South Texas Postgraduate Medical Assembly. He was elected an honorary member of the Harris County Medical Society and the State Medical Association in 1937. He was a member of the Phi Beta Pi medical fraternity. He was a Royal Arch Mason and a Knights Templar.

Dr. Patterson is survived by his wife, the former Miss Flora C. Hazen, to whom he was married October 25, 1893, in Morristown, Ohio. He is also survived by a daughter, Miss Myra Patterson, Houston, and two brothers, Wilbur and Fletcher Patterson, Barnesville, Ohio.

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Vol. XXXVI **November, 1940** **No. 7**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

Medical Preparedness Efforts Continued.—Last month we reported rather discouragingly on the result of efforts we are making in Texas to get the medical profession in line for possible military service. At that time the percentage of accomplishment of the American Medical Association Questionnaire was rather disappointing. Texas was in the lower bracket as relates to the other states. Our record was a little better than 43 per cent. We are informed that our record as of November 1, was 69 per cent. That is not bad, and it is not good. It is not bad, for the reason that it is a definite improvement on previous results. It is not good because there are still entirely too many doctors in Texas who have not done their bit in this respect. We are advised that 6,932 questionnaires came to Texas. Of these, 4,814 have been signed and returned to Chicago. That leaves a deficit of 2,118 questionnaires. Perhaps it should be said here that the present membership of the State Medical Association of Texas is 4,455. Allowing for incidental ineligibilities on a very liberal basis, there are still better than 1,500 doctors in Texas who should by all means file with the National Committee their desires and adaptabilities in the matter of medical service.

In order to make sure that every physician in Texas has had the opportunity of putting himself on record with the Government in the matters concerned, our Committee on Military Affairs is sending an additional questionnaire to each physician in Texas from whom no questionnaire has been received. As a matter of fact, efforts have all along been made to place additional questionnaires in the hands of all physicians who have failed to execute them. In addition to that, county medical society committees on military preparedness have presumably petitioned their members and others, and the Woman's Auxiliary has supplemented this effort. If this series of consecutive efforts does not get results, we shall have to confess our inability to do much more about it.

Perhaps there should be a brief reiteration as to the importance of this movement. In the last World War, the Army and Medical Service therefor had to to be created at the same time. There was a certain amount of chaos which could not have been avoided, but there was much confusion which could have been avoided had there been time for it, and had the authorities planned it. There were misfits in almost every phase of military medicine, and there was waste of special and expert service in general situations requiring anything else but special service. Distinguished surgeons who should have been in the operating room were making sanitary inspections and peddling pills in general. Eye, ear, nose and throat specialists were practicing genito-urinary surgery, and general practitioners, who presumably could render any sort of service, were treating eye, ear, nose and throat patients, not to mention the type of surgery and other service which in actual practice they would be referring to experts, or specialists, to use perhaps a better

term. Some of those who were thus misplaced did not mind. Indeed, many of them appreciated the opportunities thus given them for extension of knowledge and skill in the practice of medicine, but many were thoroughly disgusted and generally discouraged. All of this in spite of the fact that the medical profession was at the beginning of the last war the best prepared of any group in our country to render war service.

Profiting from this unfortunate experience, at least Army authorities plan to, as far as possible, place each doctor called into the service not only where he can best fit in, but where he would most like to serve. Surely most of us who are likely to be called on for medical service should appreciate this attitude, and therefore fill out our questionnaire.

Those of us who are not eligible for service for one reason or another, perhaps feel that we need not do anything about it. In that we are wrong. It is just as necessary that the civilian population be cared for as it is that the armed forces be looked after, from the medical standpoint. It is just as necessary that our industrial concerns, particularly those engaged in the production of munitions and other war material, be served. Doctors not eligible for field service with the armed forces may be entirely competent for this service, and others may prefer that sort of practice in time of war. The questionnaire develops such fact.

Undoubtedly there is some lack of patriotism in the ranks of the medical profession, exactly as exists in the ranks of any other vocational group, but we are of the opinion that this number is exceedingly small, relatively speaking. Indeed, we would rate the patriotism of the medical profession rather higher than we would that of other groups. Certainly there are no fifth columnists among us. It is our studied opinion that our failure to respond to this, the first call for medical service in the face of the impending war emergency, is purely a matter of carelessness or lack of appreciation of the importance of the situation. We are sure we can pledge every coöperation in this and the more serious situations to follow.

Medical Aspects of the Draft.—Much has been said in these columns and in *The Journal of the American Medical Association* with reference to the work of the medical profession in connection with the Selective Service Draft machinery. It seems that the situation is constantly changing and that, for whatsoever reason, the medical profession still has a very hazy idea as to what is actually happening, and what should and must happen in this connection. Therefore, and with apologies to those who are already advised, we beg here to indulge in a bit of reiteration.

First of all, and certainly this basic fact is rather well understood, there is a Draft Board in each county, and several boards in a good many counties. To each of these boards is attached at least one physician, preferably a general practitioner, for the purpose of making the necessary physical examinations of the draftees.

There are thirty so-called Medical Advisory Boards in Texas. They each cover a number of counties, in accordance with population. The membership of these boards comprises such specialists as will likely be required in dealing with any cases appealed from the decision of the county draft boards. According to the original requirements, the specialists concerned are internists, surgeons, orthopedic surgeons, eye ear nose and throat specialists, psychiatrists, radiologists, and dentists. We presume any additional specialists desired by those in authority may be added.

There are twelve Appeal Boards, upon each of which there shall be "a reputable representative of the medical profession." The doctor on this board occupies a status somewhat different from the doctors on the other boards, which are strictly technical boards and have directly and exclusively to do with the physical and mental condition of the draftees.

Presumably there will be a number of so-called Induction Boards set up in the State of Texas. These boards will be made up entirely of experts in all phases of physical examination. They will, to all practical purposes, take the place of the medical examiners for the Army, at least, in times of less stress than the present. They will make the final examination of draftees, and said draftees will not be inducted into the service at all until these boards have passed them.

All citizens serving under the Selective Service Act, except those who are on wholetime duty, will serve without pay. That includes the medical profession, which profession has traditionally rendered every patriotic service required of it, regardless of involvment, in addition to which it has voluntarily assumed jurisdiction over the health of the people, whether in civil life or in the Army. It will not fail during this emergency. It is provided only that the cost of material and technical service involved in the medical work will be paid by the Government. Therefore, neither medical examiners for the Draft Boards, nor members of the Medical Advisory Boards, nor members of the Appeal Boards will receive any pay whatsoever. Members of the so-called Induction Boards

will be put on whole-time service basis, and paid accordingly. They will be on duty following each call for as long as is necessary, an estimated period of from two weeks to three months each time. They will receive the pay and emoluments of a Major in the Medical Corps of the Army.

In accordance with a plan set up by the American Medical Association, primarily at the instance of the Surgeon General of the United States Army, the State Chairman for the American Medical Association Committee on Medical Preparedness, who in our case is the Chairman of our State Association Committee on Military Affairs, is required to advise those who provide the personnel for the aforementioned boards as to the standing and fitness of the selectees. The Governor of the State nominates and the President of the United States appoints. The demand for our part of this service came precipitately, and gave our Committee on Military Affairs no opportunity to consult with county medical societies or any other agencies of the Association, with regard to the matter. Immediately that the initial set-up was completed and the necessary adjustments made, the Committee on Military Affairs proceeded to decentralize this responsibility, which was and is considerable. County medical societies have been requested to appoint committees on military affairs, to serve in connection with any military problems which may hereafter arise, those of the draft included. Under the plan at first in operation, draft boards requisitioned the Adjutant General of the State, who directs the draft machinery, for such physicians as they needed. The Adjutant General put the matter up to the Chairman of the State Association Committee on Military Affairs, who approved or disapproved. Nominations were then made accordingly. It is intended that from here on out, draft boards confer with county medical society military affairs committees, get their nominations, approval or suggestions, before communicating with the Adjutant General. The Chairman of the State Association Committee on Military Affairs has advised that he will approve of any nominations received in this manner, except where there are special reasons for not doing so, in which instance there will be speedy readjustment as between the state and local committees. In short, every effort is being made to decentralize the whole affair.

It will be remembered that throughout this endeavor, there have been numerous and sometimes intricate and confusing restrictions as to medical personnel. No physician is supposed to enter this service who is available for military service, and availability is judged primarily by the element of age. Neither are the examinees for draft boards supposed to be specialists, except where they specialize in that line of work. The make-up of the advisory boards are fixed, and while in practice a number of specialists in a certain number of lines are required, it has frequently been necessary to create specialists out of general practitioners, because of the non-existence of announced specialists in areas concerned. Nominees must not be too old. Appointment of physicians at or near the headquarters set-up for each board is required. Membership in county medical societies is not necessary, but is exceedingly desirable. Our Military Affairs Committee has not approved and will not approve, except through error, any physician not known to be competent, reputable and licensed to practice medicine in Texas. Physicians graduating from schools not coming up to the established standards will not be approved. And in this connection, our Committee desires that it be well understood, at least by our own group, that if any such practitioners of medicine have been appointed, there has either been an error, or a disregard by higher authorities of the instructions under which they have acted.

Application of the Selective Service Law to the Physician.—This phase of the Selective Service Draft situation has been discussed here, and in *The Journal of the American Medical Association,* along with all other phases of which we can think. There apparently needs to be a little reiteration here as elsewhere.

Physicians falling within the draft age, namely, twenty-one through thirty-five, have been required to register along with the same group in all other vocations. As we understand it, there is no intention on the part of the Government of drafting physicians into the ranks of any branch of the military service. That would be a sad economic waste. Physicians cannot be created in a day. Even on a very much restricted basis, it requires two or three years to turn out an acceptable doctor. Should any physician who has registered be called, he will be released from the obligation involved upon filing an application for commission in the Medical Reserve. If commissioned, he will be subject to call as would any other reserve officer. We presume nothing can be done about it, however, if any physician so called should fail or refuse to apply for or accept commission in the reserve. He would probably then be required to serve in the ranks.

Medical students who are within the specified ages have likewise been required to register. They will not be required to serve, at least until July, 1941, by which time it is

anticipated that rules and regulations will be set up which will permit them to finish their medical education. It will be necessary that they establish the facts in the case to the satisfaction of the draft boards.

Interns and residents in established hospitals of the country, who are thus completing their medical studies, will likewise be placed in a deferred class, pending the completion of their studies. Presumably at that time they will assume the established status of the practicing physician with respect to the draft.

Doctors holding commission in the National Guard or the Reserve, may or may not be called upon for service during the training period. There are no regulations of a special nature in this respect. Presumably conditions which will justify it will serve to release any such officer from service, at least temporarily. We are not in a position to pass judgment on that. Any such physician confronted with any conditions which make it not merely disturbing to serve, but impossible to do so without great financial loss, should without delay establish such facts with higher authority in their respective units, or branches of the service. It is recognized, we think, that there is a difference between the training period and a war period, but it is also recognized that without the one there can be no competency in the other, which serves to enhance the importance of training, particularly along medical lines. It is somewhat different in the National Guard, but in the Reserve there are doubtless a sufficient number of officers to meet the requirements, who will be able to serve without too great sacrifice. It requires only to establish the facts in the case. No one wants to be hurtfully arbitrary in the matter.

Chagas Disease. — In October, 1937, and September, 1938, Dr. A. Packchanian, Protozoölogist, United States Public Health Service, conducted field studies in Texas, collecting live specimens of various species of Triatoma, known in the localities where it was found as "blood sucker," "Mexican bed-bug" and "kissing bug."[1] The work was conducted principally in the cities of Austin, Dallas, Galveston, Houston and San Antonio, and in Bell, DeWitt, Duval, Live Oak and Jim Wells Counties. Of 100 live Triatoma gerstakeri collected at Three Rivers, Texas, it was stated that 92 per cent were found to be infected with trypanosomes. According to Dr. Packchanian the bite, or the act of sucking the blood by Triatoma infected with Trypanosoma cruzi, the causative agent of South American human trypanosomiasis, or Chagas disease, is not infective. Dr. Packchanian asserts that only persons who have crushed the Triatoma on their skins or rubbed the excretion of the insect into their eyes are likely to be infected. This opinion is supported by Manson-Bahr,[2] who states that infection of man probably takes place through the insect defecating into the wound caused by its bite.

The significant point in connection with this discussion is that Dr. Packchanian is at present in the laboratories of the State Department of Health doing research work. Dr. George W. Cox, State Health Officer, requests that if any physician has a case which resembles Chagas disease that the State Health Department be advised; that it is desired that a search for clinical cases of this disease be stimulated, especially in the southern part of the State along the Mexican border. The State Health Department would like also to be advised of any sections of Texas in which the parasite Triatoma has been found.

Clinical recognition of the disease may be difficult, according to some writers, who assert that no peculiar syndrome is distinctive. There is an acute and chronic form. The acute form, according to Manson-Bahr, usually occurs in infants of about one year, fever exhibiting slight nocturnal elevations persisting as long as the parasite is in the blood. In severe cases the temperature may reach 104 F. There is often general anasarca. Puffiness of the face, accompanied by conjunctivitis is common. In the acute form there may be diarrhea, enlargement of the lymphatic glands, the thyroid and spleen, accompanied by cerebral symptoms, the terminal stages in a child being marked by symptoms of an acute meningo-encephalitis. Death usually occurs within a month, but if the child survives the disease becomes chronic. The chronic form is subdivided into the myxedematous, cardiac and nervous types, according to the heart or other organs predominately invaded by the parasite. Clinically, "Chagas disease is to be distinguished from endemic goitre, ancylostomiasis, Grave's disease, cretinism, myxedema, Addison's disease, and other disturbances of the endocrine glands."[2]

The armadillo is the most important reservoir-host.

Texas physicians are requested to report any cases suspicious of Chagas disease to the State Health Officer, or the occurrence of Triatoma in any particular areas of the State.

Federal Prosecution American Medical Association, under charges of conspiracy to vio-

1. Packchanian, A.: Natural Infection of Triatoma gerstakeri with Trypanosoma cruzi in Texas, Pub. Health Rep. 54:1547-1554 (Aug. 25) 1939.

2. Manson-Bahr, P. H.: Manson's Tropical Diseases, ed. 11, Baltimore, The Williams & Wilkins Company, 1940, pp. 166-173.

late Section 3 of the Sherman Anti-Trust Act, has been temporarily suspended. The case was called in Criminal Court No. 2 of the District of Columbia, and then immediately taken off the docket and set down for trial at some future date agreeable to both the government and the defense. We are not disposed to criticize either the government or the court, and certainly not the latter, but it does appear to us that the contingency which resulted in the postponement of this important case could have been foreseen and action taken in advance of the considerable expense and trouble to which many individuals and several public service organizations had to go because of their connection with organized medicine throughout the country. However, all of that is water that has passed under the mill. The situation can be best set out for the information of our readers by quoting two items from *The Journal of the American Medical Association.* The first is from the October 19 number, as follows:

"At this time *The Journal* is compelled to inform its readers that the work of the American Medical Association as a body, including its contribution in aid of the national defense, must suffer serious interference during the next two or three months. The Secretary and General Manager of the American Medical Association, the Editor of its publications, the Secretary of its Council on Medical Education and Hospitals and the Director of its Bureau of Medical Economics must be absent from the headquarters office during those months since they are required to attend, as defendants, their trial in the United States District Court for the District of Columbia on the indictment there returned against them and against the American Medical Association, the Medical Society of the District of Columbia, the Washington Academy of Surgery, the Harris County (Texas) Medical Society and fifteen prominent physicians in Washington, D. C. The indictment charges all defendants with having conspired to violate Section 3 of the Sherman Anti-Trust Act. The Association respectfully asks the indulgence of the medical profession and the public throughout the United States for any deficiencies which may result from this unavoidable and unfortunate condition.

"When the American Medical Association was requested to assist in the national emergency now confronting this country, its House of Delegates voted unanimously and without dissent to give wholehearted coöperation and support. The officers, the headquarters office, the Committee on Medical Preparedness, the state chairman and numerous other physicians have been and are now engaged intensively in that service, and they expect to continue therein. In advising physicians and the public of this apparent discouragement in the essential work that it has undertaken to perform, the Association desires to say that it will do its utmost to overcome all obstacles to medical preparedness. We assure the medical profession that it will never be said, either in criticism or in comment, that the Association failed its country in any hour of need no matter what obstacle might arise to interfere with the otherwise expeditious and efficient service that this country deserves in this critical hour.

"*The Journal* has indicated repeatedly the difficulties associated with medical mobilization and the nature of the work now being carried on to provide all the various arms of the government with physicians. Even though this work will be seriously hampered by absence from the headquarters office of some of the key men who have been charged with this duty, every possible method will be utilized to carry on the work as expeditiously as can be done. Plans are also being developed for the handling of correspondence, finance, personnel and all the other multitudinous affairs associated with the work of this great organization to the best extent of which the organization is capable, so that the medical world and the public may not suffer by this serious interference with the provision of medical service and the dissemination of knowledge of medical advancement."

The second item is from the October 26 number:

"According to an announcement issued in Washington on October 17 by United States Attorney Edward M. Curran, Justice James W. Morris, who is presiding in Criminal Court No. 2 of the District Court, disqualified himself from sitting on the case because of his former connection with the Justice Department as assistant attorney general. Justice F. Dickinson Letts, now presiding in Court No 1, is in the middle of a first degree murder case and has a heavy assignment for the next few weeks. 'Since no third criminal court is available at the present time,' said United States Attorney Edward M. Curran, 'I have taken the case off the assignment and it will be set down for trial in the future on a date agreeable to both the government and the defense.'

"This postponement will release the officials of the Association, therefore, to a continuation of their work in the headquarters office and in other capacities so essential at the present time."

Change In the Official Family.—Because of the widely lamented death of Dr. A. C. Scott, Sr., Dr. C. C. Green of Houston, has been made chairman of the Council on Scientific Work. Dr. D. A. Todd of San Antonio, has been added to the Council, to fill the membership vacancy.

To say that the death of Dr. Scott is lamentable is to put the matter so mildly as to sound inappropriate. This Council was created around Dr. Scott. He had been its chairman from the beginning. To him and his memory mainly belongs the credit for the great work this group has done in the building up and fostering of the scientific work of our Association.

Fortunately, there are those on the Council with sufficient experience and adaptability to take over the work. Among these is Dr. Green, whom our President has selected for this responsibility. Dr. Green has been a member of the Council for the past seven years. He not only is informed but he is interested, which, after all, is an important phase of the problem.

Dr. Todd is not without experience in organized scientific effort, such as the work of the Scientific Council. He served as Secretary of the Section on Clinical Pathology in 1934 and 1936. He is essentially a student of the art and science of the practice of medicine, and has been a consistent contributor to medical literature.

EXTRINSIC LESIONS OF THE HEART*

CLAUDE S. BECK, M. D.
CLEVELAND, OHIO

Diseases of the heart can be divided into an intrinsic group and a small extrinsic group. The heart with an extrinsic lesion is a good organ that has become crippled by some outside factor. Extrinsic heart lesions deserve special consideration because if this outside factor can be removed by operation the heart becomes a good organ and the patient can be cured. I find that this classification sheds new light upon the problems of heart surgery. It is valuable in helping the surgeon to select patients for operation. It is valuable also in determining the scope and nature of the operation in order to get the best possible result.

EXTRINSIC LESIONS

The term extrinsic lesions expresses a new concept in heart disease and it has not found as yet a place in the literature. Extrinsic lesions of the heart can be produced experimentally and something in the way of scientific order can be given to this group of deformities and dislocations of the heart.

Angulation (Fig. 1D).—The heart can be angulated to either side. The causes of angulation are adhesions to the lungs, chest wall or diaphragm, pneumothorax with dislocation of the mediastinal structures, fluid in a pleural cavity with dislocation of the mediastinal structures, and tumors of the heart, pericardium, and mediastinal structures. An important point that I should like to emphasize is that angulating adhesions of the heart are produced by infections that existed outside the heart. In other words, it is the pyogenic or tuberculous infections that can produce adhesions that can dislocate or angulate the heart. The adhesions of rheumatic heart disease as a rule are silent and do not cripple the heart. One must be cautious in making the decision to operate for the cor-

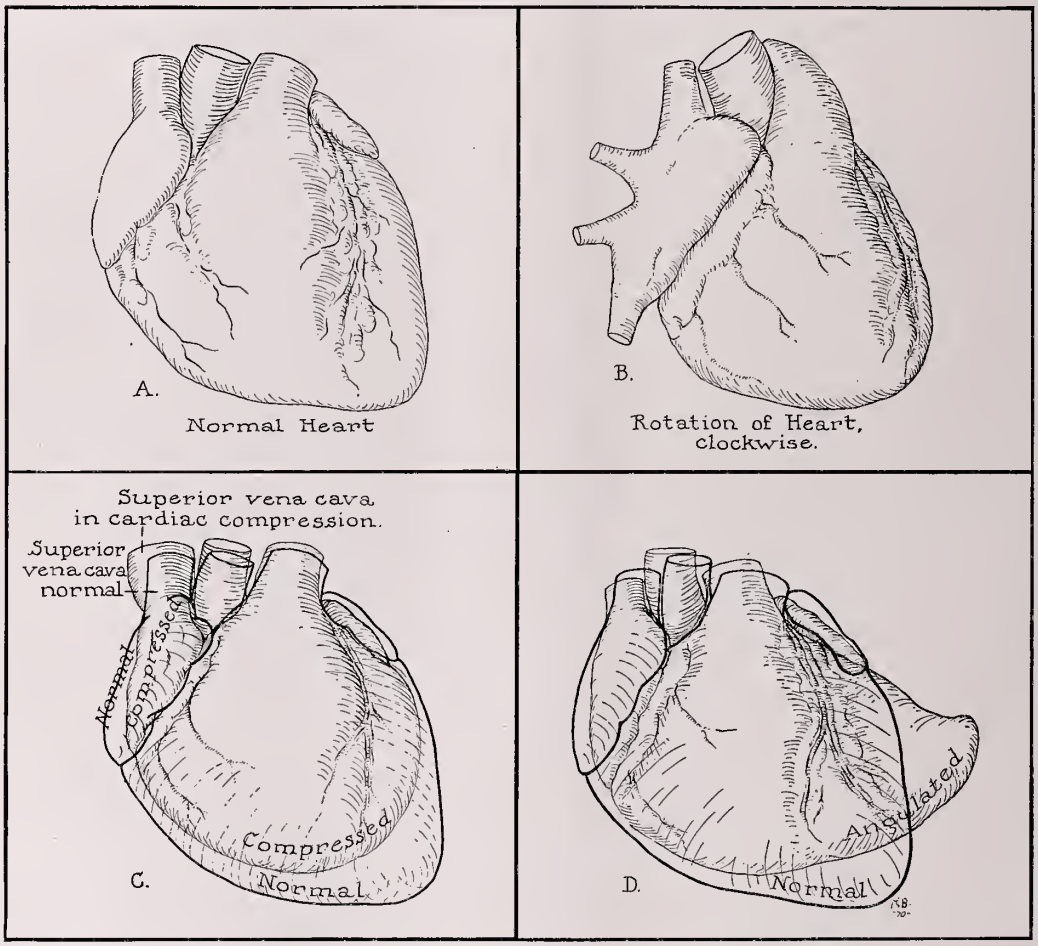

FIG. 1. Extrinsic lesions of the heart: A, normal; B, rotated heart; C, compressed heart; D, angulated heart.

*From the Department of Surgery of the Western Reserve University School of Medicine and University Hospitals, Cleveland, Ohio.

*Address delivered before a General Meeting of the State Medical Association of Texas, Dallas, May 15, 1940.

rection of adhesions produced by rheumatic heart disease. In general, my answer is that operation for cardiac adhesions in the presence of rheumatic heart disease is not indicated. The adhesions that sometimes develop in rheumatic heart disease as a rule do not disturb the heart action. This subject should be given critical study. The Brauer operation (removal of precordial bony framework) has been carried out on patients with adhesions produced by rheumatic fever and a critical analysis of the results should be made.

Pneumothorax can produce dislocations not only of the heart but also of the great vessels at the base of the heart together with sympathetic and vagus nerves. Dislocations of heart and other mediastinal structures produce tachycardia, dyspnea, pain and fainting attacks. These symptoms can be relieved or cured by thoracoplasty.

We have carried out experimental studies on the effect of angulation of the heart without displacement of the mediastinum. If the dog's heart is angulated to either the right or the left, the arterial pressure falls, the venous pressure rises, and, as a rule, tachycardia occurs. After the heart is returned to its normal position, these alterations disappear. In human patients angulation of the heart can be corrected by operation. Thoracoplasty may allow the heart to return to its normal position and satisfactory results have been obtained.

Rotation (Fig. 1B).—The heart can be rotated in a clockwise or a counterclockwise direction. Rotation of the heart is seen in patients with adhesions, scoliosis, neoplasms, pneumothorax, etc. Mediastinal structures may be rotated with the heart. In one of my patients fainting attacks could be brought on by hyperextension of the chest. Relief could be obtained by bending forward. Thoracoplasty gave this patient a satisfactory result.

In the experimental animal, rotation of the heart produces a fall in arterial pressure, a rise in venous pressure and tachycardia. These disturbances are more marked than are those produced by angulation. I have observed these reactions in human patients during the resection of compression scars from the heart. When it is necessary to rotate the heart for the resection of scars from the posterior surface of the ventricles, special attention should be given to the effect of this dislocation. The rotation should be given for only a few moments at a time, and ample rest periods are necessary for the recovery of the circulation. Otherwise the ventricles can be made to fibrillate.

Traction (Fig. 2).—Traction in the long axis of the heart is not a factor in extrinsic lesions. It does not disturb the heart. It does not produce dilatation, hypertrophy or failure of the heart. This statement has been established by considerable study in our laboratory. If a suture is placed in the apex of the heart and if traction is applied in the long axis of the heart, there is no demon-

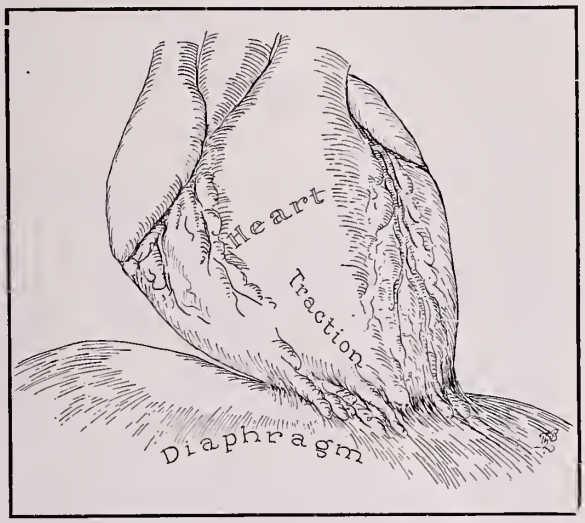

FIG. 2. Traction in the long axis of the heart is not a factor in extrinsic heart disease. Here the heart is adherent to the diaphragm.

trable change in rate, arterial pressure or venous pressure. If the heart is made adherent to diaphragm or chest wall and if the animal is allowed to live for two or three years, no ill effects of this traction can be demonstrated. Hosler and Williams carried out this experimental study. They also analyzed material obtained from autopsy examinations. They made a study of all hearts that had adhesions. These organs were separated into a group that was enlarged and a group that showed no enlargement. In each of the first group some cause for the hypertrophy was always present, such as valvular defects, myocarditis, hypertension, etc. In no case was it necessary to assume that adhesions produced the hypertrophy. In the second group of hearts with adhesions and without hypertrophy no cause for hypertrophy was present.

The conclusions from these studies are of importance. They are not in agreement with the literature and they discredit the Brauer operation of cardiolysis. This operation is a thoracoplasty over the precordium designed by Brauer for the purpose of relieving the heart in its pull through adhesions upon the unyielding chest wall. If any benefit is obtained by this operation, it must be accounted for by the correction of angulation or torsion of the heart. A pull in the long axis of the heart in its pull through adhesions upon the does not produce heart failure.

Compression (Fig. 1C). — This may be acute or chronic.

Acute compression is always produced by a fluid pressure upon the outside of the heart. The fluid is usually in the pericardial cavity but it may be in the mediastinum. A gas may compress the heart if it collects under pressure. This occurs in pressure pneumothorax. The fluid is transudate, exudate or blood. Acute compression is seen in the stab wounds of the heart and in cases of purulent pericarditis.

Beck's diagnostic triad for acute compression consists of a rising venous pressure, a falling arterial pressure and a small quiet heart. An acute compression of about 20 cm. of water is usually fatal. The venous pressure goes up to about the same pressure as that exerted upon the heart. As the compression force is increased the venous pressure must rise in order to force blood into the heart. The compression reaches a fatal level when the venous pressure cannot equalize the pressure upon the heart. It is apparent then that the height to which the venous pressure can go is the factor that determines life or death in cardiac compression. The venous pressure can be raised to higher levels by intravenous administration of blood and glucose or sodium chloride solutions. This can be used to keep the patient alive while preparation for operation is being carried out. The surgery of acute compression of the heart cannot be discussed here. It includes a discussion of stab wounds of the heart, purulent pericarditis, pericardial exudate and transudates, etc.

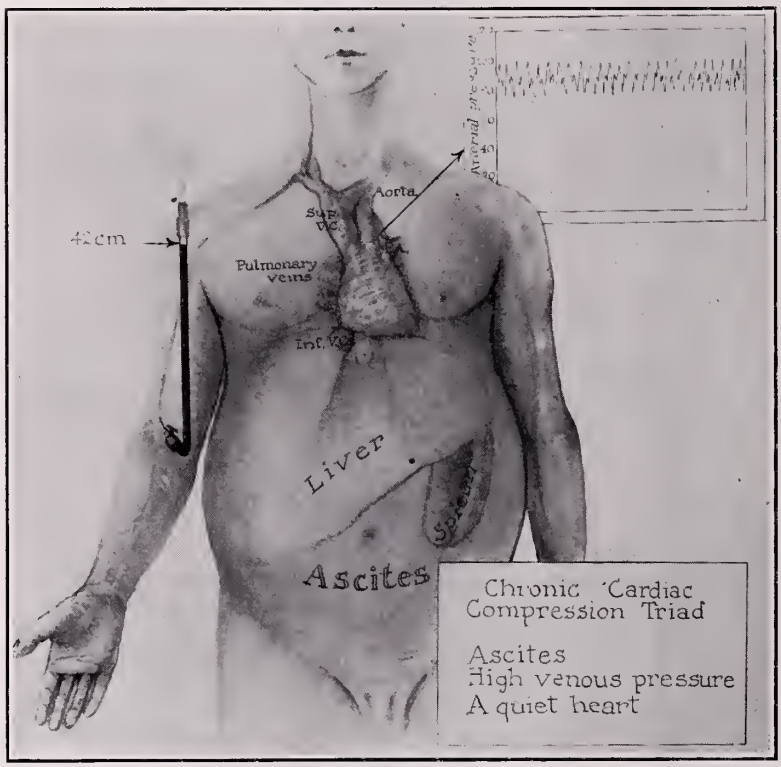

FIG. 3. Chronic cardiac compression triad.

Chronic compression of the heart differs in several ways from acute compression. In the chronic condition the venous pressure can go up much higher than in the acute condition. The highest level in my series of cases was 45 cm. of physiologic solution of sodium chloride. The high venous pressures are a protection against the compression and if they were reduced by blood letting the patient would die. In chronic compression the arterial pressure does not fall as it does in acute compression. The arterial pressure usually measures 100 mm. mercury systolic, and 80 mm. mercury diastolic. The pulse pressure is narrow and not infrequently waxes and wanes with respiration. The heart is always small and atrophic. The compressed heart cannot dilate, nor can it undergo hypertrophy. Roberts and I have demonstrated that the heart is always small and atrophic by actual measurements of heart fibers in cases of compression. The circulating blood volume increases. The amount of blood put out by the heart per unit of time is reduced. The heart plays a passive rôle in this disorder. It pumps the blood which gets into the heart but this is less than normal. One can readily understand why the heart should undergo atrophy of disuse in this disease. In several of my patients a long time was required for the heart to overcome disuse atrophy. Up to six months may be required for this after the compression has been removed by operation. Another manifestation of chronic compression is the water-logging of the patient. This is readily understood when one recognizes the high venous engorgement that accompanies this disease. All veins and capillaries are filled and distended by slowly moving blood out of which oxygen has been taken to a greater extent than in normal venous blood. The lips and nails are cyanotic. The abdomen, thorax and soft tissues contain free fluid or edema. The heart itself is a quiet organ. The sounds are distant. There is no precordial activity. There

are, of course, no murmurs because this is extrinsic heart disease. The intrinsic structures of the heart are not involved by the disease process.

Beck described a diagnostic triad which is infallible (Fig. 3). This triad makes the diagnosis simple. Special tests are not necessary to make this diagnosis. The diagnosis need never be in error.

After the clinical diagnosis is made, the next step is to determine the anatomical lesion producing the compression. The various lesions that can produce chronic cardiac compression are pericardial compression scars (not adhesions), blood, pus, transudate or exudate in the pericardial cavity, or mediastinal space, tumors of the heart or pericardium, strangulation of the heart through a rent in the pericardium and several other rare conditions. The roentgenologic and fluoroscopic examinations are valuable in making a differential diagnosis.

The surgery of compression scars is a recent contribution. The operation is dra-

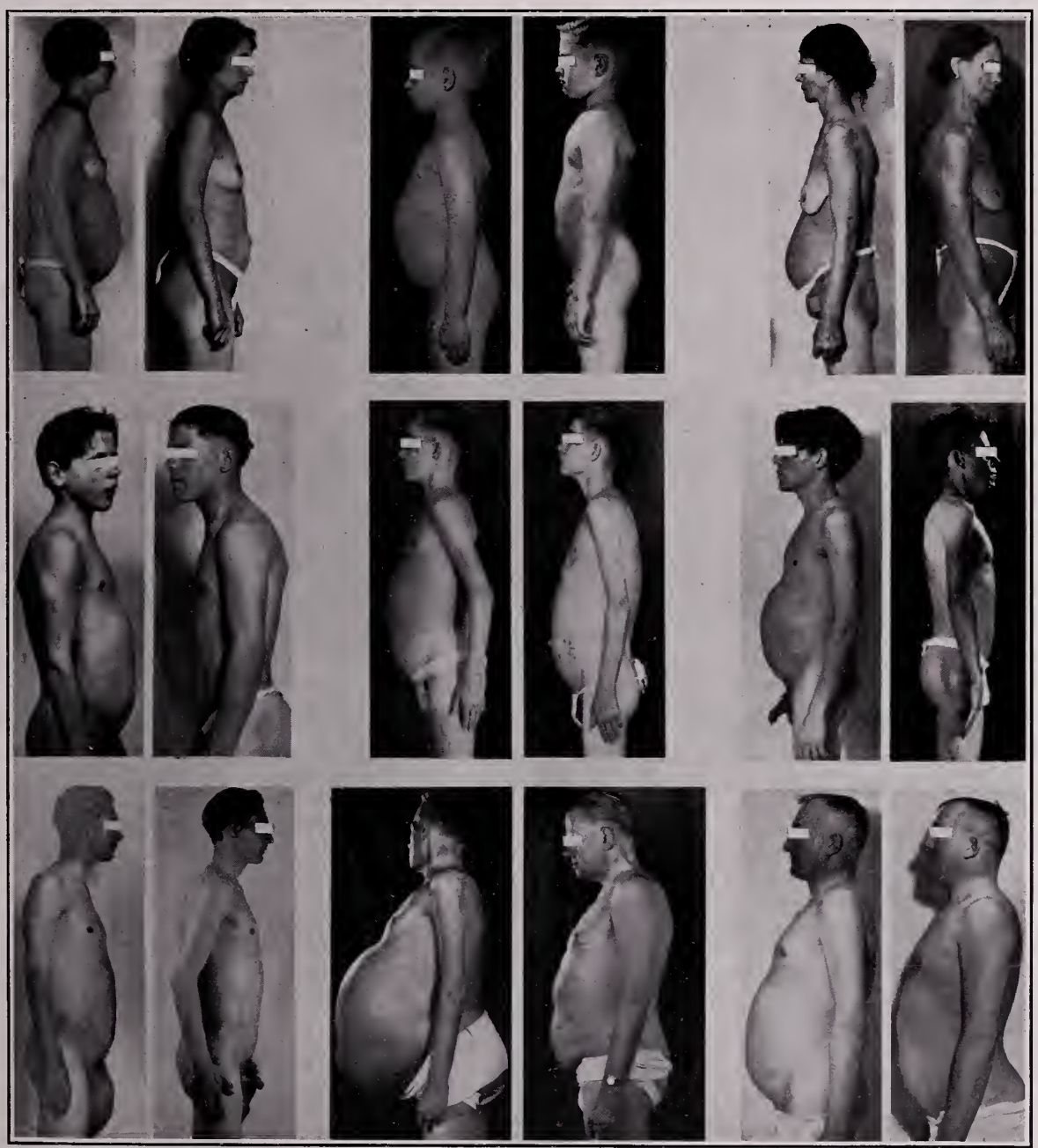

FIG. 4. Group of patients with compression scars before and after operation. Note the difference in the abdomen, nutritional state and facial appearance.

matic in its performance and scarcely less than miraculous in its immediate and remote effects upon the patient. These patients with compression scars around the heart can be cured. They can be converted from chronic cardiac invalids into perfectly healthy individuals. The cure is permanent. The risk of the operation is not great if the surgeon gives every consideration to his problem. There is no other treatment except operation. The accompanying illustration, figure 4, shows some of my patients before and after operation.

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THE EVOLUTION OF MAJOR SURGERY IN THE TREATMENT OF PULMONARY TUBERCULOSIS*

LOUIS F. KNOEPP, M. D.
SHREVEPORT, LOUISIANA

The development of major surgery in the treatment of pulmonary tuberculosis is one of the interesting chapters of surgical history. The credit of collapse therapy goes to a man who, so far as we know, never used it. In 1821, James Carson dogmatically stated that if cures in tuberculosis were to be expected, he was convinced that it would be some form of surgical collapse. The evolution of the thoracoplasty begins with the first operation in 1885 by de Cerenville, and within the next succeeding years by Simon, Estlander, Quincke, and Spengler. These men removed relatively short rib segments of one side of the thorax usually in its posterolateral aspect. The operation was used with little variation for both chronic empyema and tuberculous disease of the lung. The first progress toward a better operation came in 1895 by Boiffin and Gourdet, who, after considerable experimental dissection, wrote a virtual monograph to show that rib resection closest the transverse processes provided more effective collapse than that done by their predecessors. Many patients who were followed showed the relative shortcomings of small rib removal, but not until 1907 was there any attempt to standardize a more radical procedure. Almost simultaneously and independently, Brauer and Friedrich advocated removal of nearly twice the rib length of former operations, usually from the second to eleventh ribs in either one or two stages. As one would expect, the early operative mortality of this rather formidable procedure was prohibitive.

The work of Sauerbruch begins in 1909 and stands out until the present time. In spite of many discouraging results he retained the rather limited resections of early workers and performed the operation beginning usually at the base and employing two stages. His operation withstood a time test for approximately fifteen years with few modifications. One of these was that of Turban, who believed the removal of the fourth to eleventh ribs was sufficient in a number of cases to effect suitable collapse. The most noteworthy, however, was that of Max Wilms in 1911, which proposed removal of only the first seven or eight ribs and starting with the apex, since most of the tuberculosis he observed was in the upper lobe. The Wilms-Sauerbruch operation was a forerunner of the selective thoracoplasty utilized in the present-day technic.

Present Thoracoplasty.—The modern thoracoplasty was developed by a group of present-day thoracic surgeons who realized the inadequacy of the previous operation in either safety or effectiveness. To Hedblom generally goes the credit of insisting on multiple staged operations, the interval depending upon the condition of the patient. This modification alone so lowered mortality that longer rib-lengths were safely removed and more effective collapse afforded. Alexander proposed removal of corresponding transverse vertebral processes to attain even more desirable collapse, and Emile Holman showed that partial resection of the scapula would allow this bone to push inward sufficiently to promote greater collapse when only six ribs were removed. Moreover, the interval between stages could be lengthened if the rib beds were painted with diluted formalin. This delayed regeneration of the bone and allowed patients to recuperate sufficiently before the application of the next succeeding stage. Lastly, the chapters on selection of patients, the time to operate, preoperative and postoperative care, anesthesia, and recognition of tracheobronchial tuberculosis have added not a little to present-day results.

The present posterior thoracoplasty calls for resections of virtually total lengths of the first and second ribs and long lengths of a sufficient number of succeeding ribs to incorporate completely the disease process. Excision of corresponding transverse processes and grading of the last rib or two are neces-

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sary complements. The latter permits both better cosmetic appearance and allows the scapula to fall inward. The ribs are removed in multiple stages, taking from one to two and a half ribs at each operation depending on the condition of the patient before and during the operation. Strict asepsis is a requisite, for wound infection is not only hazardous due to the extent of the dissection, but delays succeeding stages. The operation is performed on patients upon whom less radical methods of treatment have been tried and failed. Moreover, it is done when the type and extent of tuberculosis demands a permanent procedure. Patients must necessarily be good general risks as other types of surgery are better adapted to patients who have either exudative disease on the operated or contralateral side, low vital capacity or other serious complications not related to tuberculosis. Where patients are carefully selected and managed, and where the operation is performed properly, it will close approximately 85 per cent of the cavities on which it is employed and convert the sputa of a similar percentage of patients. The mortality today should be less than 3 per cent.

Semb Apicolysis.—There are many cases which demand supplementary measures to the conventional posterior thoracoplasty. One of these is the Semb apicolysis. In 1891, Tuffier demonstrated the first extrapleural separation of parietal and visceral pleurae from the dome of the bony thorax. Carl Semb, within the last decade, believed a similar release of the pleural apex would be valuable in dropping large upper lobe cavities to a level where the lateral thoracoplasty would be more effective. He adapted the operation of apicolysis as a supplement to the first stage of a posterior thoracoplasty and it has remained since as a valuable addition in the management of grossly cavernous upper lobe disease.

Haight-Bisgard Operations.—Supplementary anterior thoracoplasty becomes frequently advisable when the posterior operation does not sufficiently close the tuberculous lesion. As early as 1909, Eden devised an anterior procedure to augment the collapse of the posterior operation, and Wilms, in 1911, modified his own technic of thoracoplasty to include the anterior portions of the upper ribs. Two types of anterior operation have been now universally adopted. The Haight operation consists of removal of the first rib cartilage and osseous portions of the second, third and sometimes fourth ribs through a perimammary incision. The unresected cartilages are fractured at their sternal ends and bent inward to allow additional collapse of the anterior thoracic cage and still afford rigidity. The Bisgard operation is somewhat more radical in that the second and third cartilages may be resected in addition, but osteoperiosteal bone chips are sutured beneath the perichondrium to insure later stabilization of the anterior thorax.

Even when posterior and anterior thoracoplasty are properly performed, some few patients remain who demand revision operations to close an uncontrolled disease process. Provided the condition of the patient warrants further surgery and there is some assurance that an additional procedure will effect sputum conversion, we may turn to one or more of several operations.

Revision Thoracoplasty.—A secondary resection of regenerated ribs in staged operations is effective in converting 90 per cent of the patients on whom it is used. Besides being technically more difficult due to disturbed anatomical relations, it also carries a greater operative risk. Moreover, since there is no uniform way in which ribs regenerate, there can be no standardization of the operation. There still remain a few patients with either stiff-walled or blocked cavities in whom revision thoracoplasties are found to be failing.

Cavity Drainage.—As early as 1920, Sauerbruch advocated open drainage for tuberculous cavities as a primary measure. We now believe it has no place as a primary operation except where there is a tension cavity. However, it does have a place in patients with a residual cavity following secondary thoracoplasty. The cavity must be sufficiently large to localize properly and the operation is comparable to the surgical unroofing used in drainage of non-tuberculous abscesses. Surprising results are sometimes seen with this type of operation, particularly in freeing the tracheobronchial tree, and consequently the contralateral lung, of tubercle bacilli. Needless to say, the wound develops a fistula which may take years to heal.

Monaldi Drainage.—When the operation is used as a primary measure most thoracic surgeons prefer to perform the drainage by the closed method of Monaldi. A trocar of special design is used which permits insertion of a small calibre catheter within the cavity. If the size of the cavity is not reduced rapidly, continuous suction may be applied. Frequently, a thoracoplasty may be superimposed with closed drainage, leaving the catheter in place until the cavity is closed.

Lobectomy.—Another method of attack in blocked cavities or in lesions underlying bronchostenosis, particularly tuberculous

bronchiectasis, is lobectomy or pneumonectomy. Collapse measures in the foregoing instances are usually ineffectual. While partial or total pulmonary resection is done rather infrequently, some encouraging results have been reported by Jones, Alexander, and O'Brien. The operation may be performed as a primary procedure in rare cases, or more often following unsuccessful thoracoplasty. In either case the technical difficulties of the operation are great, and the threat of wound tuberculosis makes the operation rather formidable except in expert hands. Aside from this, the main concern is usually the stability of the opposite lung since any degree of active tuberculosis on the good side is certain to bring a rapid spread of disease and a fatal outcome.

Neuhof's Operation.—Other types of operation have been devised for resistant cavities. Neuhof proposed an operation known as pneumocavernolysis where an extrapleural pack of iodoform gauze was sutured over the cavity after overlying regenerated rib was removed. A fair proportion of these cases had to be converted to open drainage after the pack ruptured into the cavity, and the mortality was fairly prohibitive on the few on whom it was employed.

Matson's Operation.—Neuhof's operation was modified by Matson a few years ago by using flexi-tissue instead of iodoform gauze. His recent reports lend encouragement to the technic although his end results are not available as yet.

Coryllos' Operation. — Before his death Coryllos deliberately opened some of these resistant cavities and sutured their inside walls together. Again, the risk was great due to the inevitable infection which followed.

Cavity Plication.—A year or so ago the author employed a new idea for attacking cavities which persisted following thoracoplasty. The method was introduced during a revision operation when the cavity was accidentally unroofed. After careful resuture of the cavity wall with extrapleural Lembert stitches, a second and third row of invaginating sutures were taken to re-insure the first suture line. Without realizing it at the moment, the cavity wall had actually been plicated without placing a single stitch through its inner wall. This case of extrapleural plication has remained well and the cavity firmly closed. This procedure was since employed on two other patients (without unroofing the cavity, of course) with one successful result and one death. In the latter case, it was impossible to effect sufficient extrapleural separation and a revision thoracoplasty was all that could be done. However, the patient developed a contralateral lobar pneumonia and died on the fifth postoperative day.

Paraffin Plumbierung.—When Tuffier performed his extrapleural pleurolysis in 1891, he unknowingly instituted another valuable method of selective collapse. His patient developed a massive blood clot which eventually obliterated the space. The first attempt to introduce any form of material for packing was that of Schlange in 1907, who used iodoform gauze. Since that time many other agents as fat, muscle, and inflatable balloons were used, but all were unsatisfactory from the standpoint of eventual infection. In 1913, Baer of Switzerland first used paraffin and it alone remains today as the material of choice. Paraffin plombage can be used in fairly small apical lesions which need permanent collapse. Since the paraffin is often extruded when large amounts are used (upwards of 400 grams), we try to limit it to lesions above the level of the first rib anteriorly. Moreover, we hesitate to employ it over cavities whose diameter is over four centimeters for fear of producing necrosis of the cavity wall. It has a particularly useful indication in patients who need bilateral permanent collapse, where a thoracoplasty has been used successfully on one side already. It has also been used in itself in a number of cases bilaterally.

Extrapleural Pneumothorax. — Similarly, in 1935, extrapleural air was popularized by Graf and Schmidt of Germany, for lesions which demanded temporary collapse or where the separation was too extensive for paraffin. In addition the operation has its relative indications in patients who have had advanced bilateral apical disease and in whom there is still sufficient remaining pulmonary tissue to justify operation. The operation seems to be much better tolerated than the usual posterior thoracoplasty and can be performed in one stage. Separation can be effected by either an anterior or posterior approach after removal of a short rib segment. It is best to remain in the endothoracic plane, although no great danger follows accidental entrance intrapleurally. One must be careful, however, to prevent entering lung tissue, as infection will result from such a mistake. Separation is usually carried well below the lesion and can even be used for basal lesions by a supra-diaphragmatic approach. The complications of the operation are many and quite variable. One of the most serious is perforation of the lung with a broncho-extrapleural fistula. This invariably results in a threat to the patient's life from the overwhelming sepsis. If the patient survives, the space is nearly always lost. Even with-

out perforation, a certain percentage of cases will obliterate spontaneously within a few months but most of these can be salvaged if recognized promptly by conversion to extrapleural oleothorax. The oil in these instances remains as a fairly permanent form of collapse, being only slowly absorbed, and is usually well tolerated. We never exceed 400 grams of oil for fear of a rupture drowning the patient. If air refills are continued in the uncomplicated cases, they require closer supervision than the ordinary intrapleural pneumothorax. In its fairly recent debut, the operation has promise of being a fairly valuable procedure in both early and advanced forms of the disease.

CONCLUSIONS

1. The history of surgical collapse therapy is reviewed to embrace the major operations used in tuberculosis.

2. Some bizarre and novel methods of operation are also presented for those cases which demand especial consideration.

3. The indications for each surgical maneuver are only briefly given. Many of the considerations involving accessory measures are not reviewed here, but are merely mentioned.

4. The surgery of tuberculosis is not complete. It continues to change and advance with amassing experimental and clinical researches.

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ABSTRACT OF DISCUSSION

Dr. James W. Nixon, San Antonio: The excellent review of surgery of pulmonary tuberculosis which Dr. Knoepp has just presented is of course very interesting to this section. However, it is unfortunate that he did not have time to speak to greater extent on the benefit of compression therapy in the treatmen of pulmonary tuberculosis. The aspect of the subject is of sufficient importance to warrant further emphasis, and I am sure it will be with Dr. Knoepp's approval that I speak of it further.

First I wish to point out that 85 per cent of all tuberculosis cases with giant cavities, if given conservative treatment only, become fatalities within a period of five years. By conservative treatment I mean the lack of one or more of the forms of compression therapy which we have just heard described. The time has come when not only the victims of tuberculosis but the medical profession as well, must realize that simple rest in bed with an abundance of fresh air and good food, no matter in what climate, does not give a guarantee of recovery. As a matter of fact, in the vast majority of cases, such patients come to a fatal end. And I think we may go a step further in stating that it is likewise useless to adopt compression therapy for these cases unless the proper method or methods are used. I am taking this opportunity, and I try never to miss any afforded me, to point out the folly of continuing a method of treatment, such as the use of artificial pneumothorax, when after a reasonable time there is no evidence that the cavity is lessening in size. It is indefensible to continue such treatment until there is a farther involvement of the bad or an extension to the co-called "good" lung, or until a gradually developing physical unfitness of the patient should prohibit the more formidable surgical procedure which might prevent disaster. The responsibility involved is comparable to that of standing by and watching an acute appendix perforate before calling a surgeon. The comparison implies that the value of surgery in acute appendicitis is well recognized, and it is my sincere hope that the need of timely and properly selected surgery for pulmonary tuberculosis will become equally well understood.

Dr. Knoepp has described almost every operation used in the treatment of pulmonary tuberculosis. Without attempting to discuss each operation separately, several of which I have not done, I should like to say a word about extrapleural pneumothorax. My reaction to the use of this operation is similar to that of Dr. Knoepp. My first experience gave brilliant results. The patient was an elderly woman with a large apical cavity. She was coughing almost constantly and was otherwise unfit for thoracoplasty. The operation produced no shock. The patient left the hospital in a week with the cavity closed, and she has remained well during the past eighteen months. My four succeeding similar operations, however, brought only varying success. It is my belief that extrapleural pneumothorax should be performed with some reluctance since there is such extreme uncertainty concerning the results that may be obtained from its use.

Speaking further concerning the method or methods indicated in regard to surgical treatment of tuberculous patients, it seems to me that it is only fair that the patient should be made aware in the beginning that if one method of compression should fail, another should be resorted to. For example, I think it is not wise to tell a patient definitely that a one-stage or a two-stage thoracoplasty will bring about the desired results. It is much safer to tell him that a certain amount of surgery will be necessary to insure results, and that the case is not finished until the cavity has been closed. If the patient is not willing to undergo the necessary amount of surgery to secure the needed collapse he should never submit to an operation. If the consent of the patient can not be gained for the performance of whatever surgery may be deemed advisable, the entire weight of responsibility for possible bad end results will certainly not fall upon the doctor's shoulders.

THE SYSTEMATIC USE OF STROPHANTHIN IN THE TREATMENT OF DECOMPENSATION OF THE HEART

FRANZ V. GRUNBAUM, M. D.
HOUSTON, TEXAS

A survey of the American[28, 18] and English[19] literature for opinions concerning the intravenous injection of strophanthin, reveals that nearly all authors agree that the use of strophanthin should be restricted to emergency cases. The reason for this attitude may be found in a short resume of the history of the strophanthin treatment.

Mendel[21] in 1900 and later Kottmann[17] in Naunyn's Clinic were among the first to inject a digitalis preparation intravenously. Fraenkel[9] in 1905-1906 in Krehl's Clinic in Strassburg, after extensive pharmacological studies, for the first time treated many cardiac patients systematically with strophanthin. Summarizing his experience, Fraenkel said that the results surpassed the expectations. Subsequently this method was used by numerous physicians in Europe and America. Then came the setback[8]. It was learned that several doses of 1 mg. of K-strophanthin injected within twenty-four hours caused death in some cases. These deaths were mostly of patients who had been treated over a longer period of time with large doses of digitalis without a satisfactory clinical effect. In such cases the first injection of strophanthin may have proved fatal because of the accumulation of the strophanthin and the already toxically acting amount of digitalis bound in the body. These unfortunate occurrences were discouraging and they were for years and until today a serious obstacle to the further use of the drug.

Most unsympathetic in regard to the use of strophanthin today is probably Thomas Lewis[19]. His textbook on heart diseases has had quite an influence on medical opinion in England. He does not mention intravenous strophanthin therapy at all and recommends the disuse of the oral administration, which in my opinion has never been proved either clinically or experimentally to have a therapeutic effect on the diseased heart.

Fishberg[7] emphasized that strophanthin should be given then when the intravenous injection of a digitalis substance is preferable. However, the advantage of such intravenous treatment seems to him not yet established. He thinks that its use may be advantageous in acute pulmonary edema caused by weakness of the left ventricle. Fishberg attributes the formerly described fatal cases to the high dosage. He recommends at the beginning of the treatment a maximum dose of 0.5 mg. of ouabain, which should be followed by further injections of 0.1 mg. at one hour intervals until in cases of auricular fibrillation the pulse is slowed to less than 80 beats per minute. In his book, issued in 1937, Fishberg mainly refers to the paper by Wyckoff and Goldring[29] (1927). Fishberg's reference to a paper published in 1927, indicates that during the last ten years not much has been added, in the English language, to the statements made by Wyckoff and Goldring. Wyckoff and Goldring, supported by pharmacological and clinical experience of their own[29] and others (Hatcher and Baily[11]), have given 248 injections of ouabain (Lilly) to thirty-two patients. In their studies 0.5 mg. was injected as a first dose, and until the onset of a clinical effect (slowing of the pulse), 0.1 mg. was injected every half hour. The total dose thus administered to patients with auricular fibrillation was from 0.7 to 1.7 mg. Good clinical results were obtained also in three patients, who were the only ones who showed a normal rhythm and who received injections of from 0.5 to 0.9 mg. The statement made by Wyckoff and Goldring apparently differs from that made by Hatcher and Baily[15] in regard to dosage. The latter especially emphasizes that not more than 0.5 mg. ouabain should be given within twenty-four hours. Wyckoff and Goldring, however, have not had any unfavorable result with their dosage, which in my opinion is very high. They emphasize the essential clinical improvement of their patients. They regarded the onset of the slowing of the pulse as the objective indicator of this improvement.

The dose of 1.1 mg. within two hours, recommended by Cohn and Levy[2] twenty years ago, evidently appeared to Wyckoff and Goldring much too high.

About twenty years later (1936), Rykert and Hepburn[22] confirmed the results obtained by Wyckoff and Goldring. While Wyckoff and Goldring have used G-ouabain, manufactured by Lilly, Rybert and Hebrun have administered the amorphous K-strophanthin and have given 1/100 grain (0.65 mg.) as a standard dose. "The standard dose (1/100 gr.) was repeated in *many of the cases in an hour,* and in one case of auricular flutter was given three times at intervals of one hour." Rybert and Hebrun judged the clinical result from the same criterion as Wyckoff and Goldring, namely, the slowing of the heart rate. They treated, with four exceptions, exclusively patients who suffered from auricular fibrillation. Their conclusions, in consideration of the clearly emphasized clinical and pharmacological viewpoints, seem to me so important that they are summarized here:

1. A large dose of strophanthin is safe intrave-

nously if digitalis has not been recently administered.

2. Febrile patients require larger doses.

3. A definite reduction in heart rate is usually observed in five to fifteen minutes, reaching a maximum in twenty to sixty minutes.

4. Vomiting is rare. This dose of strophanthin can be repeated with safety in an hour if necessary, but we suggest that it should not be repeated until the rate has reached a stationary level or has started to increase.

One of the best authorities in heart diseases, Paul D. White[28], recommends in the new edition of his textbook (1937) the application of strophanthin in the following way:

"In carefully selected cases of overwhelming congestive heart failure, without previous treatment, strophanthin or ouabain, injected intravenously in the dose of 1/240 to 1/120 of a grain (1/4 to 1/2 mg.), never more, may result rapidly in great improvement with the saving of life. The dose may be repeated in twelve hours and then once every day or two as a ration (1/8-1/2 mg.) if necessary."

White then limits this recommendation, wherein he emphasizes the life saving effect of the systematic strophanthin injections, by stating:

"It is largely a matter of choice and custom whether one uses digitalis or strophanthin in emergency treatment. On the European continent strophanthin is often employed successfully while here in the United States digitalis has been preferred. If it seems desirable to use strophanthin, and digitalis has been previously given, an interval of forty-eight hours should be allowed to elapse before the strophanthin is administered intravenously, so that danger of poisoning may be prevented."

I wish to conclude this survey of the present day opinion regarding the strophanthin therapy in the United States by quoting from "Diseases of the Heart," by Fred Smith,[23] a textbook issued in 1938 on internal medicine:

"Ouabain and amorphous strophanthin are the only preparations that have an effective digitalis-like action. These preparations, however, are rarely employed, except in emergency. They are powerful in their action and thus dangerous if given in large doses, or if digitalis has already been used. The dose of ouabain, intramuscularly or intravenously, should not exceed 0.5 mg. (1/125 grain) and that of the amorphous strophanthin 1 mg. (1/65 grain). This may be followed by the usual oral administration of digitalis."

It seemed necessary for me to describe in brief the opinion, at present existing in the United States, regarding the application of strophanthin, before trying to show the manner in which strophanthin takes a special place among the digitalis substances from a clinical-pharmacological viewpoint, and what practical conclusions may be drawn from its use in cardiac cases.

Digitalis and strophanthin are chemically related substances, namely, glucosides. These glucosides can be split through hydrolysis into a sugar-free part, the genin, and into one or several carbohydrate molecules. While the genins are very similar, the structure of the sugars with which these genins are combined, is essentially different. Digitalis purpurea contains a methyl pentose encountered only in plants, which is broken down in the human body with difficulty. On the other hand, the strophanthins contain mostly pentoses and hexoses which are easily broken down in the animal organism and which are very readily soluble in water. K-strophanthin contains a disaccharide, consisting of glucose and cymarose, which is highly soluble in water; while the methyl-pentone-rhamose of the G-strophanthin is less soluble in water.

This chemical peculiarity of the strophanthins is undoubtedly the reason for which their chemical action differs from that of the digitalis glucosides. Tests on cats, which Fraenkel[10] made more than thirty years ago, have shown that the effect of intravenously incorporated digitalis substances — accompanied by slowing of the pulse rate—develops more slowly and remains longer than that of the strophanthins. Contrary to the digitoxin action, this effect could be produced again and again by repeated strophanthin injections, while the digitalis substance showed a cumulative effect until toxic symptoms appeared. These facts were later thoroughly investigated by Hatcher. Thus the question, recently much discussed, is answered, whether one could not replace the intravenous strophanthin therapy by intravenous digitalis injections with as good or better effect. Digitoxin, administered orally or intravenously, is completely absorbed by the gastro-intestinal tract, as pointed out by Weese[27] and confirmed by numerous pharmacological investigations. Even though the digitoxin is completely absorbed by the organism, its distribution or its fixation in the various organs is much more unfavorable than that of the strophanthins. Weese[27] has made a thorough investigation of this subject, the details of which need not be mentioned here. It leads, for practical clinical purposes, to the conclusion that 9 per cent of the total quantity of strophanthin circulating in the blood is taken up by the heart, while only 6.2 per cent of the digitoxin is so absorbed. Therefore it follows that for complete therapeutic effect considerably larger quantities of digitoxin than of strophanthin are necessary.

Hatcher[14, 15, 16] has determined the cumulative effect of the different digitalis glucosides. In other words, he has measured the degree of resistance of these myocardial bound glucosides to washing out and to disintegration. His investigations, too, have shown that the cumulative effect of digitoxin is by far the greater and that after twenty days, 17 per cent of the minimum lethal dose can still be demonstrated by the cat test. In testing

with the whole digitalis leaves, 15 per cent of the minimum lethal dose remains after five days. On the other hand, the strophanthins, according to this method, cannot be detected after forty-eight hours because they have been eliminated. Hatcher has proven that different types of animals have shown varying cumulative results in these investigations. However, this clinical and extremely important action is established: *The cumulative effect of the strophanthins is much less, and they are eliminated much more rapidly than the digitalis glucosides.* We must assume that large digitalis doses, the cumulative toxic effect of which is clinically evidenced by nausea and extrasystole, cause cellular damages in the diseased heart similar to those found in the animal experimentation, which unfavorably affect the further course of the disease. We find in treatment with large digitalis doses almost regularly a flattening down of the T-wave. It often becomes negative. This was pointed out first by Cohn and Frazer[3] and later on by Blumenfeld[1] and others[11]. These changes in the electrocardiogram have been repeatedly used as a guide in further digitalis therapy[5]. They constitute a warning which must be regarded seriously. It is better if such changes do not occur at all for they are with great probability to be considered as evidence of further myocardial damage or as coronary insufficiency.

The basic pharmacological-clinical differences in the effect of digitalis and strophanthin consist, therefore, in the following:

(1) The intravenous strophanthin effect appears earlier than the digitalis effect, more rapidly also than that of the intravenous digitalis injection.

(2) In the strophanthin medication almost all effective substance is eliminated within twenty-four hours, while in the digitalis medication, oral as well as intravenous, some is retained to exert a cumulative effect. This effect, lest it should lead to toxic doses and thus to cellular damage of the heart, limits the application of the drug. In medium and severe cases of cardiac insufficiency it is therefore not possible to give the heart as much effective substance as is necessary to bring about full compensation.

We have all seen cardiac patients who, early during digitalis therapy, suffered nausea and pulse irregularity without reaching compensation of the heart. There are other patients, who, after longer periods of digitalis therapy, suffered from similar disturbances, so that it was not possible to continue their digitalization. In these cases the strophanthin treatment fills a gap and it not only relieves distressing symptoms, but also restores some capacity for work to the patient. The systematic use of strophanthin in the treatment of chronic cardiac insufficiency accomplishes better clinical results and at the same time prevents toxic symptoms. The intravenous use of digitalis preparations over a longer period of time is not practicable because of the danger of the cumulative effect as previously mentioned. For the treatment of the diseased heart the oral route must always be subordinate to the intravenous one, for orally administered digitalis is affected by gastric and intestinal secretions which limit its therapeutic action. In the forms of chronic cardiac insufficiency which are accompanied by congestion of the liver, the effect of oral therapy is especially unfavorable. The rectal application of the digitalis drug, to evade these obstacles, offers an unsatisfactory substitute; prolonged rectal application may cause intestinal irritation. Aside from this, the stasis in hepatic circulation so alters the conditions of absorption that this route is not much more effective than the oral route.

Only a few therapeutic methods are founded on so definite a pharmacological basis as the intravenous strophanthin therapy. Hatcher[14, 15], Brody[16], Straub[24, 25], Weese[27]—to mention only a few—have shown experimental pharmacological results of such clearness that they give a definite theoretical basis for clinical work, which seldom occurs in medicine. The cumulative effect in digitalis therapy has been investigated so thoroughly in the animal that it is evident why the physician cannot use sufficiently large doses of digitalis in severe cardiac insufficiency without the appearance of symptoms of toxicity. "By cumulative effect we understand that within certain periods repeatedly administered doses of a substance are additive in effect inasmuch as the effect of the following doses is added to the effect of the previous doses so that too strong a pharmacological action results." (Weese). "A too strong pharmacological action," is, in other words, a toxic effect. The cardiac muscle is damaged, often permanently, and the chances of complete recovery of the cardiac muscle lessened. If we agree with these unquestionable pharmacological results, we must recognize the justification of the systematic application of the strophanthin treatment and must admit that it is not merely "a matter of choice and custom whether one uses digitalis or strophanthin in emergency treatment," as expressed by White[28] in his excellent textbook on heart diseases. It is, I believe, this varying opinion on the clinical importance of the cumulative effect which, as correctly stated by White, has led to the fact

that the strophanthin therapy is viewed on the European continent in a different light from that in the United States.

Albert Fraenkel has for thirty years, until his death in 1938, energetically presented in clinical and experimental reports and lectures his experiences with the intravenous strophanthin therapy. He has shown the advantages of this method over the oral administration of digitalis. He and his pupils have treated cardiac patients of all social levels and in every stage of cardiac insufficiency, some exclusively and some partially with strophanthin. I have previously published a short presentation of the method and my own experiences.[11]

It is obvious that the intravenous incorporation of substances effective on the heart must be of greater advantage than the oral therapy for the treatment of cardiac weakness. We know that digitalis and strophanthin, administered intravenously, are taken up not only by the heart, but also by other internal organs, especially the liver. After oral administration much effective substance is taken up by the intestine and only the remaining not yet combined substance adheres to the heart and becomes effective there. By the intravenous administration, and only by this, can we exactly determine the quantity of effective substance which is seized by the heart. It amounts to 10 per cent of the incorporated total dose. The intravenous administration has, therefore, the advantage of greatest intensity of effect and of accuracy of the smallest doses. These advantages are never possible in oral administration.

Which patients should have the intravenous treatment? There is no doubt that when the first signs of cardiac insufficiency appear, rapid effect of the treatment is not absolutely necessary. Oral therapy might here be properly employed. However, in these cases also, the intravenous treatment may be superior. We have seen quite a number of patients, especially in the early stage of decompensation of mitral stenosis, who were refractory to oral digitalis therapy. These patients could be compensated with small intravenous doses of strophanthin in a relatively short time.

The most important field for strophanthin therapy will always consist of those patients who have the symptoms of more progressed or severe cardiac insufficiency. They are especially those patients who suffer from dyspnea and congestion of the lungs and abdominal organs. Only when absolutely necessary should the physician employ opiates which just as in cardiac asthma bring about momentary relief, but very often have an unfavorable effect by decreasing the excitability of the already damaged respiratory center. In these cases the introduction of the strophanthin very often brings relief of the distressing symptoms quickly, through improvement of the cardiac action. All toxic by-effects of oral digitalis therapy such as nausea and vomiting, which very often appear with larger doses, are eliminated. The physician can accomplish with a relatively much smaller dose of effective substance a satisfactory therapeutic effect because a larger quantity of the glucosides is taken up by the heart. In enteral application a considerable amount of the product is taken up and stored in the organs of the abdomen, especially in the liver. This is the reason that relatively much larger doses of digitalis are ineffective in those cases in which strophanthin has an excellent effect.

The average dose in twenty-four hours of from 0.4 to 0.5 mg. of strophanthin-K is to be recommended. It is of advantage to administer this dose on the first day in two portions, that is 0.25 mg. per dose with an interval of from eight to twelve hours. Oral digitalization must not have preceded immediately the administration of strophanthin. A period of forty-eight hours seems in general sufficient between the cessation of the oral and the introduction of the intravenous therapy. Especially great caution is to be taken only if very large digitalis doses—above 0.3 Gm. folia digitalis titr. daily—have been given, and which have already brought about toxic symptoms. In such cases at least seventy-two hours should elapse before the introduction of the strophanthin treatment, and the daily dose of strophanthin, which is given after forty-eight hours, should not exceed 0.25 mg. per day for at least two days.

A general rule for intravenous strophanthin therapy cannot be given for the same reason that general rules should not be given for the digitalis dosage. The degree of the cardiac weakness and the result of the treatment determine the amount of the single dose and interval between the single doses. The injections can be given daily for eight days and longer, without the appearance of toxic symptoms, to those suffering from severe decompensation. The patients do not suffer from nausea, no extrasystoles appear such as are caused through digitalization, the T-wave does not become negative. As Levine[18] in his excellent book says that "the margin of safety between the minimal toxic and minimal lethal dose is the same for strophanthin and digitalis," this is certainly correct for the single dose. For the repeated injection the question of cumulation is decisive, which, as previously mentioned, is

entirely different for strophanthin from that of digitalis substances.

As mentioned before, the degree of the cardiac weakness is the deciding factor for the manner of strophanthin administration. Its use depends not on the kind of anatomic damage of the heart but only on the degree of the cardiac weakness itself. Acceleration of pulse, dyspnea, congestive bronchitis, congestion of the liver and edema are the symptoms which demand the use of strophanthin. The heart rhythm, especially the presence or absence of auricular fibrillation, can expect equal results of the strophanthin treatment. We have seen many cases in which the symptoms of congestion were treated with good results independently from regularity or irregularity of the heart rhythm. Disturbances of the heart rhythm are as such no indication for the application of either digitalis or strophanthin as long as the heart action is fully efficient. On the other hand, the presence of accumulated extrasystoles, absolute arrythmia, or heart block are no contra-indications, if symptoms of decompensation are present. In heart block a certain caution should be taken if ventricular contractions are especially slow, approximately below 40 per minute.

Only the degree of decompensation should indicate the size of the dose; the patient's body weight can be disregarded. Body weight plays a part if we approach the toxic limit and then only when there are very great weight differences such as exist between the child and adult. In the administration of strophanthin, body weight can be disregarded within the therapeutic doses mentioned here. Only the degree of decompensation should be considered. The more severe the congestive symptoms, the larger must be the dose and the shorter the intervals between the injections. The milder the decompensation symptoms are and the easier they can be relieved by the treatment, the smaller are the doses necessary and the longer the intervals can be between injections. This therapeutic viewpoint is in agreement with the experiences at the bedside, and it is well based upon the experiences of the experimental pharmacology: It has been experimentally determined that in severe insufficiency the heart takes up considerably larger amounts of effective substance than the less damaged heart. The reason for this is that the blood, containing glucosides, remains longer in the cavities of the damaged heart and consequently more of it is absorbed, while the fully compensated heart is rapidly traversed by the blood and therefore absorbs little of the digitalis substance. Much, however, is absorbed by the other organs of the body. From these experimental facts, it follows that the time used for injecting plays an important part in the effectiveness of the strophanthin: The slower the strophanthin is injected into the circulatory system, the greater is the effectiveness. Strophanthin, given to the heart in smaller quantities over a longer period of injection time, has a more efficient effect than a larger amount injected quickly. Therefore, it should *be injected slowly.*

The medium and severe cardiac insufficiency should, as mentioned, be considered for intravenous strophanthin treatment first of all. The character and severity of the existing congestive symptoms should govern the physician's decision to use strophanthin or not. One can disregard the etiology of the cardiac insufficiency, whether it be a defect of the cardiac valves, a myocardial damage, hypertensive arteriosclerosis, or other causes. I should like to call attention to one particular phase, coronary thrombosis and infarction of the heart, believing that in this case strophanthin is especially superior to digitalis. We know that the occurrence of this disease has increased from year to year. The clinical picture of coronary thrombosis has been described by American authors in all details. Each time coronary thrombosis occurs it is immediately followed by milder or more severe cardiac weakness. The degree of the damage of the heart action depends partly upon the severity of the shock, which is always produced by coronary thrombosis; partly upon the size of the thrombosed vessel and thus the size of the resulting infarct. These factors decide the extent to which the cardiac muscle is affected. In a considerable number of cases of coronary thrombosis, strophanthin therapy seemed to me to be life-saving. Edens[4] has recently expressed the same opinion.

In conclusion, I should like to say a word about the choice of the preparation. The physician should understand by digitalis treatment not only the oral digitalis therapy but also the intravenous strophanthin treatment. In the same way as he prefers a certain digitalis preparation, with the effect of which he is especially familiar, so should he know a strophanthin preparation with regard to its therapeutic and toxic manifestations. Every dependable preparation, that is, every preparation which is always made with the same and stable titr. is suitable for clinical use. The pharmaceutical industry places at the disposal of the physician ampules containing G- and K-strophanthin. G-strophanthin, also called ouabain, was made, as previously mentioned, by the pharmacologist Arnaud for human use and has

been used clinically by Vaquez[26] and his pupils[20]. It is still used to a large extent today in France. For reasons pointed out, Fraenkel has decided in favor of the K-strophanthin in a concentration which deviates from the requirements of the U. S. P. This strophanthin, concerning the clinical use of which there are by far the most extensive experiences, has approximately twice the therapeutic effect and toxicity of that prescribed in the U. S. P. for K-strophanthin. All I have said about the clinical application of strophanthin, especially dosage, is based upon the experience with this strophanthin, experiences which extend over the last three decades. The Abbott laboratories have recently manufactured K-strophanthin with the titr. which corresponds to that of Fraenkel's strophanthin.

Through the efforts of the Council on Pharmacy and Chemistry of the American Medical Association in coöperation with numerous prominent pharmacologists and clinicians, the evaluation of digitalis preparations and strophanthin has been very much furthered and clarified. I do not consider it justifiable to discuss the pharmacological viewpoint in detail. From the standpoint of the physician, who is concerned with the safety of his patient, it seems necessary that each strophanthin preparation, which may claim dependability, must be marked with the strength relative to the international standard in such a way that the physician may draw his conclusions. It seems most advisable to use the U. S. P. strophanthin unit as a basis for comparative measurement of all other preparations and to express the content not only in frog units, but especially also in cat units, which in intravenous administration of pure preparations is most important. In this direction some points are not clear and will have to be clarified. The designation K-strophanthin is not sufficient as there are an amorphous and a crystalline K-strophanthin, and the statements made in the literature for the effective strength of K-strophanthin differ considerably from each other. It is of less importance for the clinician how these contradictions can be explained than to be sure that the preparation used by him is always at his disposal in the same effective strength. If the physician believes he can obtain better clinical results with a preparation which deviates from the U. S. P., he should, by all means, know how the preparation chosen by him compares with the requirements of the U. S. P. He must also determine, if clinical results are to be assured with the strophanthin method, whether the preparation is stable; in other words whether time or climate can change the composition of the content of the ampules. These desires, according to our present knowledge, can be fulfilled; preparations which do not come up to these requirements are dangerous to patients.

If this report stimulates the use of strophanthin in the treatment of cardiac weakness, it will have served some purpose.

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725 Medical Arts Building.

READING WHILE EATING INADVISABLE

To read during a meal for the purpose of preventing fast eating amounts to using one unhygienic procedure to correct another, *Hygeia, The Health Magazine* declares in answer to an inquiry.

"The sight, smell, taste and thought of appetizing food have a favorable effect on digestion," *Hygeia* explains. "Anxiety and lack of interest in food have an unfavorable effect. Digestion proceeds best when one eats at ease or is at peace with himself and the world. Very few persons can read and at the same time enjoy their food.

"It is true that reading certain subject matter tends to relax and relieve tension. Ideally, anything that relaxes one, such as reading, singing, taking a short walk or observing a period of quiet should come before or after the meal. During the meal, attention should be focused chiefly on the appetizing qualities of the food."

ABDOMINAL CONDITIONS IN CHILDREN, WITH SPECIAL REFERENCE TO THE MECHANICAL APPENDIX*

ALAN BROWN, M. D., F. R. C. P. (C)
TORONTO, CANADA

There are few symptoms with which the physician is confronted that may be due to such a multitude of causes or that may be more puzzling than that of recurrent pain in the abdomen. The latter element is greatly enhanced in some of these cases in children because of the difficulty of obtaining a reliable history and intelligent coöperation in the physical examination. One feels that those who only see these cases in the hospital have very little conception of the difficulty of the family physician who sees the child in the home, surrounded by friends, where it may exhibit all types of bad temper and lack of discipline which the overindulgent parents have fostered. This same child when seen in the hospital under strange surroundings may be almost unrecognizable. From having done nothing except scream and kick from the minute he saw the physician enter the room at home, in his new environment he may be quite submissive and coöperate in the examination very well. In this type of child we must be careful to use every means possible to avoid antagonizing the patient until we have been able to make a careful abdominal examination.[4]

It is impossible to discuss all of the conditions in children of which abdominal pain may be a symptom and so I shall only mention those that should be given careful consideration in order to distinguish them from the mechanical appendix.

1. *Indigestion and Constipation.* — This class probably comprises the largest group of all children complaining of abdominal pain. Children who eat improper food, particularly rich in fat, or who persistently bolt their meals, are constipated, and generally break the rules of hygiene, consistently complain of abdominal pain. Another factor is fatigue. It is surprising to observe nowadays the number of children in whom fatigue is associated with abdominal pain. The physiological explanation of such pain is rather difficult to interpret unless it has to do with a disturbance of the vasomotor system. At any rate, in abdominal pain associated with fatigue, pain is most commonly observed after school hours. It can usually be relieved by the feeding of sugar such as glucose or sweetened orange juice. On physical examination there is no localizing pain or tenderness and a diagnosis may generally be arrived at by increasing the rest period and by the use of sugar prior to the time of onset of the pain. It is particularly difficult in our present high pressure method of living to get a child to take sufficient rest. These cases may be corrected with diet overcoming constipation and giving adequate rest.

2. *Recurring Throat Infection.*—There are many cases consulting the physician with the complaint of repeated abdominal pain associated with fever and a sore throat, followed by signs of a head cold. In many of these children the pain is due to lowered food tolerance consequent to the infection, thus producing colic. At the same time there may occur embolic involvement of the mesenteric glands bringing about general abdominal tenderness and embolic involvement of the appendiceal wall. There are still other instances, for want of a better name referred to as "intestinal grip," in which abdominal pain is a frequent and very often a disturbing factor in diagnosis. I think it is in this condition and under these circumstances of an acute upper respiratory infection associated with abdominal pain in which the most frequent mistakes are made in arriving at a correct diagnosis. It is most important to get a careful history as to the onset of the upper respiratory infection and on examination of the abdomen in these cases one does not elicit any localized tenderness. The pain is spasmodic in character simulating ordinary infantile colic. If the abdomen is palpated and auscultated, one hears a rumbling sound of gas and liquid material. I think this latter point is one of the most significant differential diagnostic points in distinguishing "intestinal grip" from a mechanical appendix or even an acute appendicitis.

3. In forty cases of persistent pyuria, only five patients gave a history of recurring abdominal pain and two complained of pain over the bladder. In eighty-two cases of acute pyuria, fifteen gave a history of pain in the abdomen. In twenty cases of kidney stone, six gave a history of abdominal pain. In all these cases, investigation of the genito-urinary tract will clear up the diagnosis.

4. *Gastro-intestinal Allergy.*—This is not an infrequent cause of abdominal pain accompanied by soreness and either diarrhea, constipation or vomiting. The symptoms are due to edema of the mucous membrane and spasm of the smooth muscle which produces disturbances of function. In many patients the history of allergy in the family would lead one to place this abdominal pain symptom complex under suspicion of hypersensitivity. It has been found that foods might be an etiological factor since examples have been encountered in which specific foods

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caused abdominal pain after ingestion. Food dislikes have incriminated certain foods which, when intentionally forced, produced abdominal pain. In some instances pain followed shortly after the introduction of a new food into the child's diet. Many patients give a history of frequent colic and vomiting during infancy and childhood, which would be interpreted as signs of food allergy. The location and nature of the pain are fairly characteristic. Although localization is not as accurate as in the adult, the child usually points to the region of the umbilicus. Occasionally, the epigastrium, para-umbilical regions or right lower quadrant is designated. Pain is usually described as cramplike. The duration of these attacks of pain varies between minutes and hours, and they may occur one or more times a day or at intervals of weeks, months or longer periods. As a rule, there are other associated gastrointestinal symptoms, such as constipation, diarrhea, flatulence, mucous or watery stools, nausea or vomiting. Frequently the pain may be present after eating and urticaria may occur with the attacks of pain. Generally there is no fever. On physical examination of the abdomen there are no abnormal symptoms. Pain is absent. Occasionally one can palpate the outlines of the colon.[3]

5. *Psychic Cause.*—Many children complain of abdominal pain as a defense reaction to escape eating meals, focus attention upon themselves or to avoid doing things that may be distasteful.

6. *Worms.*—In five cases of tapeworm, two patients gave a history of pain in the abdomen. One complained of slight pain on and off during the habitation of the worm and the other had severe abdominal pain each time segments were passed. It is doubtful if pinworms cause any abdominal discomfort and then only if they are within the appendix, which condition is found in about 10 per cent of appendices removed at operation.

7. *Meckel's diverticulum* has been found to be the seat of diverticulitis, intussusception and chronic ileus, with or without attachment of the diverticulum to the umbilicus.

8. *Cyclic vomiting* can easily be detected by the repeated attacks and by the sequence with which the events occur in any attack; for example, constipation and flatulence, fatigue and irritability, acetonuria and pallor, vomiting and indefinite abdominal pain. Removal of the appendix between attacks leads to disappointment as the disorder continues.[2]

During a ten year period at the Hospital for Sick Children there were 1,264 cases of appendicitis. Of this group, 51.3 per cent were clean cases and 48.7 per cent were ruptured. The total mortality among the ruptured cases was 11.24 per cent. In Toronto during a five year period there has been an average of 100 deaths each year from appendicitis, or 16.3 per 100,000 population. In Ontario during a similar period there was an average of 438 deaths each year from this cause, or 13.2 per 100,000 of population. In the United States 18,100 deaths were reported from this cause in 1930, or 15.3 per 100,000 population. (Dr. J. L. McDonald.)

"Why, with improvement in public health methods and better facilities for preventive medicine, have we this high death rate? Undoubtedly the medical profession are to blame. Until the beginning of the century an operation for appendicitis was a comparatively rare event. It became gradually more popular until it became quite the vogue to have one's appendix out and any patient who complained of a pain in the abdomen was subjected to an appendectomy, with little regard for the pathology present. As many of these patients came back still complaining of symptoms, the operation became less popular. The pendulum swung to the other extreme, many surgeons refusing to operate on any except those suffering from a fulminating attack. From this time till the present a 'great deal of water has flowed under the bridge' and we have progressed in our methods of differential diagnosis. We now have a more perfect understanding of the condition and are not subjecting our patients to operation until they have been carefully investigated, but at the same time we realize that the condition may be recognized in its most incipient stage."[5]

As evidence of this latter statement let me say that during the past few years a little over 600 private patients have been operated upon for the mechanical appendix by our Surgical Staff, without a single death, which speaks well for modern surgery.

Our thanks are due to the Surgical Staff of our Hospital for carefully analyzing their mortality statistics and pointing out that 90 per cent of acute appendices rupture in children under 5 years, with a death rate of 16 per cent, and furthermore on careful inquiry into these cases it was almost invariably found that there had been some previous significant history which would have assisted in the earlier diagnosis. The main points then brought out by this study were:

(1) That appendicitis was a disease of all ages.

(2) That in children the attacks frequently commenced with mild symptoms and were prone to recur.

(3) That once the appendix has ruptured an inevitable mortality must be expected.

And I might add a fourth myself and state that in no textbook published today is there recognized a description of the mechanical appendix.

To clarify the symptoms associated with

the mechanical appendix, I should like to offer the following physiological explanation.

"The vermiform appendix has in general the same physiological functions as the large gut. It concentrates the intestinal contents. Water is absorbed and a residue is left. Peristalsis is present and the mucous membrane secretes mucus. A normally functioning appendix has liquid content flow into it, water is absorbed, and peristalsis evacuates the content and is timed with the peristalsis of the large gut. If, however, there is any obstruction to the evacuation of the residue, such as a swelling of a lymph mass, a hyperactive sphincter, or an extraneous band, then the lumen may be so narrowed that abnormal peristalsis may be required to discharge the contents into the cecum. If the residue remains in the appendix it continues to lose water and becomes a dry fusiform mass, so shaped by being pushed along the lumen to the point of obstruction. This then is a disturbance of function directly attributable to an anatomical cause. The increased peristalsis working against obstruction causes pain, and the pain is referred frequently to the epigastrium. The pain is produced by peristalsis, and anything initiating peristalsis in the intestines also initiates it in the vermiform appendix. A patient had an appendicostomy for lavage of the large intestine. The tip of the appendix having been brought through the abdominal wall was allowed to unite there. When the wound would permit of it and the coöperation of the patient was obtained the tip was pinched and the patient complained of pain around the umbilicus and in the epigastrium, which is the region for referred pain from the ileum, cecum and appendix. If the appendix were pinched severely for five or ten seconds she would complain, in addition to pain, of nausea and a desire to vomit. This feeling disappeared immediately on cessation of the pinching. Later, when the appendix was opened and lavage carried out, the too rapid entry of fluid into the lumen of the appendix caused nausea and pain, and, if the pressure were not relieved, vomiting. The symptoms associated with appendiceal colic, therefore, arise from obstruction. Whether or not this obstruction is transient or permanent depends upon the strength of the peristalsis and the passage of the material that is to be forced through the narrow opening. If the peristalsis is successful in emptying the appendix of its content, be it gaseous or semi-solid, then abnormal peristalsis ceases and pain disappears. But if the obstructed content is held against the narrowed lumen until there is a change in the mucous membrane then one has a closed loop intestinal obstruction developing distal to the narrowing, and with pathological changes supervening and involving the muscle, peristalsis ceases and an abscess develops in the obstructed appendix. Appendicitis exists only with the beginning of pathological change which is primary in the mucous membrane as a result of the obstructed loop. A narrowing of the lumen of the appendix may cause an intermittent obstruction over a period of years, and during the time of this intermittent obstruction peristalsis is increased, including peristalsis of the large bowel, and pain is experienced, diffuse in character, at the level or above the level of the umbilicus. These attacks of pain pass off with the evacuation or relief of obstruction in the appendix and leave no pathological change in any of the tissues of the appendix."[7]

At this point a caution is wise concerning the reliance placed upon x-ray findings. The slowness in filling and delay in emptying of the appendix in some cases may be demonstrated by the radiologist and in those cases in which it can be shown, their findings are of course helpful in arriving at a diagnosis. Because the roentgenologist can demonstrate this delay in only a certain number of cases and because it is known that a perfectly normal appendix may not be observed to fill on x-ray examination, negative x-ray findings should not mislead one when other signs and symptoms point to trouble in the appendix.

An interesting observation has been made by members of the medical and surgical staff of our hospital, that certain families are prone to attacks of appendicitis, and, on operating on members of these families, very frequently the type of obstruction which precipitated the attack is similar in each member. Dr. McDonald recalls one family of eight, including the parents, in which five members of the family had the appendix removed following repeated attacks. In four of these, the cause of the symptoms was found to be due to an obstruction to the base of the organ, because of a retrocecal appendix that was sharply kinked at the site where it joined the cecum.[6]

A typical history is that of a child who has had short attacks of recurrent abdominal pain for an extended period of time, either at daily, weekly or monthly or even longer intervals. The pain varies from a dull ache, a burning sensation, or a sense of fullness, to one of a sharp, stabbing character. The attacks may be very fleeting but they have a marked tendency to recur, and at times there may be associated nausea or even vomiting. The recurrence of attacks, in spite of a well regulated diet and good hygiene is of most important diagnostic significance. Children frequently stop in their play, turn a little white, have a slight generalized abdominal pain, which almost instantly ceases. These are the cases which are usually but incorrectly diagnosed as indigestion. The pain may come on during or from one-half to two hours or so following a meal, or the pains may have no relation whatsoever to meals. Not infrequently the child takes only a few mouthfuls of food and says "that he is full." Not infrequently, if in the case of a boy, the parent will notice him loosening his belt, or in the case of a girl that she complains that "her dress band is too tight." These are all most significant symptoms and if not especially inquired for will frequently not be mentioned. Pain is frequently brought out by exercise; its location at first is usually epigastric or umbilical, only later on occurring at the usual site. A bowel movement, passage of gas, or vomiting may give prompt relief for the time being. With these symptoms there is frequently associated poor color,

poor muscle tone, poor nutrition and defective posture.

A careful abdominal examination either at the time of actual pain or in the interval will reveal a definite point of tenderness around the navel, often causing the child to complain of epigastric pain. There is no muscle rigidity. It is most essential to obtain the child's confidence and gently palpate the whole abdomen, watching the facial expression and the legs for any movement indicative of pain. When the tender spot is touched the leg or legs will become flexed and the facial expression indicative of discomfort. The temperature, pulse, respiration and blood count are normal. A roentgen ray examination is quite useless.

A second type is that found in a child who has been in apparently good health, but usually poor nutrition. He goes to bed, only to awake several hours later with sharp abdominal pain which causes him to double up. The pain is soon relieved and he sleeps again only to awaken a second time with a return of colic, and he frequently vomits. At first the pain is in the umbilical region, acute and spasmodic; later, it becomes less acute but more continuous, and becomes localized in the right lower quadrant. The temperature, pulse, respiration and blood are normal, but there is frequently an anxious expression. These attacks of colic may have numerous remissions.

There is a third type of mild acute appendicitis, probably embolic, secondary to an infection from tonsillitis, colds, sinusitis, etc. The patient has malaise, nausea, a coated tongue, loss of appetite, and constipation, with a slight fever. There is a vague abdominal pain at the umbilicus which later becomes more or less localized to the right side. The patient may be in bed for a day or two, at the end of which time the symptoms gradually clear up. Deep iliac tenderness can be obtained, and if an operation is performed edema of the appendiceal wall is found. It is often these overlooked attacks which cause inflammatory reaction with subsequent fibrotic stricture of the appendix.

There are numerous other combinations of symptoms, neither so definite nor so suggestive of chronic appendicitis, but equally important to the child. A child who on automobile trips has nausea, or actively vomits, or who has had periodic attacks of vomiting, either repeated mild attacks often in the morning before breakfast, or severe ones with associated acidosis, probably has a mechanically obstructed appendix. He may, however, never have had any abdominal pain. An examination of the abdomen at the time frequently discovers deep iliac tenderness and less often rigidity. These patients are treated as a rule for an imbalance of the sympathetic nervous system causing reflex vomiting and spasticity of the colon, resulting in colicky pains and constipation.

It is necessary to proceed with extreme caution and observe these patients for some time and to rule out any involvement of the genito-urinary tract, but when by a process of elimination focal infections are excluded, one is justified in making a diagnosis of mechanical lesions in or around the appendix. Diagnoses are largely based on a history of long continued symptoms and by elimination rather than by actual physical findings.

CONCLUSIONS

1. Any disease which has such a high death rate merits careful consideration.

2. When in doubt about an appendix in a child, it should be taken out.

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320 Medical Arts Building.

STAPHYLOCOCCUS AUREUS MENINGITIS

Sulfathiazole, the latest addition to the sulfanilamide family, proved effective in bringing about the recovery of a child suffering from staphylococcus aureus (a yellow pus-producing bacterium) meningitis (inflammation of the membranes surrounding the spinal cord and brain), Frederick W. Dietel, M. D., Churchville, N. Y., and Albert D. Kaiser, M. D., Rochester, N. Y., report in *The Journal of the American Medical Association* for August 24.

Staphylococcus aureus as a causative agent of meningitis is comparatively unusual in children, but when it does occur the mortality rate is high. In the case reported by the two physicians the drug was administered by mouth daily for a period of nine days. "At the end of three weeks there was complete recovery," they say.

POTASSIUM CHLORIDE AND HAY FEVER

The administration of potassium chloride for hay fever by a method previously reported as being successful gave no relief to thirty-eight of forty patients, Hyman Miller, M. D., and George Piness, M. D., Los Angeles, report in *The Journal of the American Medical Association* for April 27.

The two patients who were relieved obtained as good results from the use of solutions of potassium bicarbonate and sodium chloride. All treatments were given in unlabeled bottles so that the patient would not know which remedy he was receiving and thus would not be influenced by previous conceptions of its effectiveness.

THE ACUTE LEUKEMIAS*

W. N. POWELL, M. D.
TEMPLE, TEXAS

Definition.—Acute leukemia is a rapidly fatal systemic disease of unknown etiology, involving primarily the blood-forming organs, characterized by disorderly proliferation of the hematopoietic tissues, by infiltration of organs with immature leukocytes, and very nearly always by the presence, at some stage of the disease, of immature leukocytes in the circulating blood.

History.—The acute leukemias have been recognized since 1857 when von Friedrich[1] pointed out their existence, but it was not until Naegeli[8] described the myeloblast in 1900 that their classification became relatively accurate. Before 1900 practically all cases were regarded as being lymphatic in type. In recent years, however, the general opinion has been that most cases are of the myeloid form. A third type has been recognized since 1913, when Reschad and Schilling-Torgau[14] described monocytic leukemia.

Occurrence.—Very little accurate information is available concerning the actual frequency or rarity of occurrence of acute leukemias. From the data of Ordway and Gorham[9] and of Rosenthal and Harris[15] one would estimate that the disease should occur about once in every one to three thousand general hospital admissions. At the present time the diagnosis of acute leukemia is being made more frequently than in former years, largely because of better recognition of the leukopenic variety of the disease.

Age Incidence.—The age incidence of acute leukemia is quite definite, according to some of the larger series of reported cases. Ward[19] in 1917 charted the age incidence of 398 cases. According to his data, 65 per cent of the cases occurred during the first twenty-five years of life, the maximum incidence being in the first five years of life. It is largely a disease, then, of childhood and early adult life. It is not commonly encountered in persons over the age of 50 years, although rarely cases have been reported in patients even in the eighth and ninth decades.

Sex Incidence and Distribution.—The disease is approximately twice as common in males as in females. It is world-wide in distribution and affects all races. A relatively high incidence has been reported among individuals exposed to radio-active substances. Some observers have reported what appears to be an epidemic tendency in certain areas. Sydenstricker[16] studied seven cases of acute myelogenous leukemia in young people from a limited area in south Georgia. These cases occurred in rapid succession and comprised more instances of the disease than had been seen in the same area in twenty-five years. He was able to establish no causal factors.

Nature of the Disease.—The sudden onset and acutely febrile course of acute leukemia have caused some observers to suggest that the process is infectious in nature and is fundamentally different from chronic leukemia. However, both acute and chronic leukemia present essentially the same type of pathologic picture, namely, hyperplasia of the hematopoietic tissue. Moreover, chronic leukemia of long duration may terminate with the manifestations of the acute form. The evidence, therefore, would favor the idea that acute and chronic leukemia are manifestations of the same fundamental pathologic process and until more knowledge is available, most of the evidence would favor the neoplastic theory of its origin.

Duration.—The course of the disease is characteristically short. Warren,[20] in a study of 113 cases, found that 84 per cent of the patients died within eight weeks of the onset of symptoms obviously due to leukemia.

Pathologic Findings.—The pathologic findings in acute leukemia are characterized by marked hyperplasia of the hematopoietic tissues in the bone marrow, spleen, and lymph nodes. Organs and tissues show diffuse infiltration with the predominating cells. The histologic differentiation of the various types of acute leukemia is a difficult matter and the pathologist should probably base his final conclusions upon the combined clinical, hematologic, and pathologic findings. The oxidase reaction may be of considerable assistance in determining whether the cells infiltrating the tissues are myeloid or lymphoid in origin. Forkner[4] believes that the degree of infiltration and obliteration of the normal architecture of the lymph nodes is of some differential significance. In lymphatic leukemia he states that the organization of the node is completely destroyed, whereas in myelogenous leukemia, although the node is involved by the process, the normal architecture is fairly well preserved. Monocytic leukemia resembles the lymphatic type in that the architecture of the node is destroyed.

Clinical Features.—The clinical onset of acute leukemia may be insidious or abrupt. Warren[20] in a survey of 113 cases noted three complaints which predominated as prodromal or early symptoms of the disease. These were sore throat and enlarging tonsils, ulcerative stomatitis, and upper respiratory infections. Over 50 per cent of the patients in his series gave a history of a respiratory infection

*From the Department of Clinical Laboratories, Scott and White Clinic, Temple, Texas.

*Read before the Section on Clinical Pathology, State Medical Association of Texas, Dallas, May 14, 1940.

which persisted, failed to respond to treatment, and was followed by more prostration than was to be expected. Pierce[13] likewise noted the frequence of a preceding infectious illness in forty-one cases of acute leukemia in children.

Among other early symptoms causing the patient to seek medical aid are: bleeding from the gums, bleeding from the nose, purpura, fever, tachycardia, weakness, enlarged lymph nodes, or pallor due to rapidly developing anemia. In children, especially, pain in the extremities and joints is often a prominent symptom.

The physical signs in acute leukemia are usually quite characteristic. Any number or combination of the following more important signs may be present—enlarged spleen, enlarged liver, enlarged lymph nodes, swelling and ulceration of the bucco-pharyngeal mucosa, and hemorrhages into the skin or from the mucous membranes.

Laboratory Findings.—The urine frequently shows albumin, casts, and varying numbers of red blood cells. Rarely Bence-Jones protein is present. An increased amount of uric acid is usually found in the urine.

In those cases in which metabolic studies have been made the basal metabolic rate has usually been moderately to markedly elevated.

Radiographic examination of the bones may occasionally show erosions, and rarely tumors of leukemic tissue.

The blood in leukemia presents the following important characteristics:

(1) Anemia develops rapidly as the disease progresses.

(2) The blood platelets are markedly diminished in numbers.

(3) The coagulation and bleeding times are prolonged.

(4) There may be leukopenia, normal total leukocyte count, or slight, moderate, or marked increase in the total number of leukocytes. The total number of leukocytes often fluctuates widely during the course of the disease. Leukopenia of a severe grade is often present in some phase of acute leukemia, and it is the leukopenic or so-called aleukemic variety of the disease which offers the greatest difficulty in diagnosis. Hill[6] has suggested that in the leukopenic type very primitive cells, identified with the primitive free cell level of differentiation, are involved. These cells tend to remain in the tissues, only a few escaping into the blood stream.

(5) On stained blood smears the predominating leukocytes generally are uniformly immature in type.

DIFFERENTIATION OF THE VARIOUS TYPES OF ACUTE LEUKEMIA

The clinical features of acute leukemia may be of some value in the differentiation of the various types of the disease. Forkner,[4] Wainwright and Duff,[18] and Osgood[10] are of the opinion that diffuse swelling and ulceration of the gingivae and buccal mucosa are characteristic of acute monocytic leukemia. Dameshek,[2] and Whitby and Britton,[21] however, feel that there is no detectable difference in the lesions of the mouth in the various types of acute leukemia. The degree of enlargement of the lymph nodes may be of some differential value, acute lymphatic leukemia in general showing a more marked degree of enlargement than either acute myelogenous or acute monocytic leukemia. Some authors claim that enlargement of the liver is more common in acute monocytic leukemia than in the myeloid or lymphatic types.

The age of the patient may be of considerable differential value. Acute leukemia in children is almost invariably of the lymphatic type, whereas in adults it is usually of the myeloid form. Acute monocytic leukemia apparently is more apt to occur in middle life, although cases have been reported in almost every age period.

The ultimate differentiation of the types of acute leukemia, however, must be made upon the hematological features of the disease. This differentiation is often difficult, sometimes impossible, to make with any great degree of accuracy. The majority of the leukocytes present in the blood are generally of a uniform, immature type representing the blast cell stage of development. The cytologic distinction between myeloblasts, lymphoblasts, and monoblasts in blood smears is denied by those cytologists who consider all three lines to have a common stem cell. It is my own belief that differentiation of stem cells on cytological grounds alone cannot be made with any degree of certainty. The oxidase reaction, advocated by many, fails to distinguish between the most immature cell types, but is often helpful in identifying the more mature cells. Supravital staining is considered by some to be useful in the identification of cells of the monocytic series. The observation of the intermediate phases in cell maturation is probably the most reliable means of differentiating between the types of acute leukemia. In those cases in which such intermediate phases are not demonstrable it is often best simply to make the diagnosis of acute leukemia without qualification as to type.

DIAGNOSIS OF ACUTE LEUKEMIA

The diagnosis of the typical, fully-developed case of acute leukemia with characteris-

tic symptomatology and high total white cell count usually presents no difficulties, resting largely upon the recognition in blood smears of considerable numbers of blast cells. The so-called "hiatus leukemicus" of Naegeli, in which there may be many myeloblasts and a good many fully mature, segmented neutrophiles, but no intermediate forms, is said by Naegeli to be absolutely diagnostic of the leukemic state.

The leukopenic or "aleukemic" variety of acute leukemia may offer a puzzling diagnostic problem. Careful study of blood smears, however, nearly always reveals significant degrees of leukocytic immaturity. The "hiatus leukemicus" is often present in such instances. In cases showing marked leukopenia throughout the course of the disease it may be difficult to find enough leukocytes in ordinary stained smears to permit of their accurate classification. In such situations the concentrated or buffy-coat smear may be very helpful. I have found that four drops of a mixture of equal parts of 40 per cent potassium oxalate and 60 per cent ammonium oxalate to which is added ten cubic centimeters of blood, as suggested by Kracke and Garver,[7] centrifuged for twenty minutes at high speed immediately after mixing, provides material for good buffy-coat smears.

Examination of the sternal bone marrow, either by trephine biopsy or by sternal puncture, is sometimes necessary to establish the diagnosis in obscure cases of acute leukemia. It is to be remembered, however, that biopsy of the bone marrow is not necessarily an infallible diagnostic measure. In occasional obscure cases the findings may be difficult to evaluate and one may be left as much in doubt as to the diagnosis as before. The trephine method, employing the technic of Custer,[1] permits of detailed study of the marrow, including sections for histologic study. Sternal puncture is a simpler procedure and is usually satisfactory for diagnostic purposes. Occasionally biopsy examination of a lymph node may be of considerable aid.

DIFFERENTIAL DIAGNOSIS OF ACUTE LEUKEMIA

Clinically, Vincent's oral sepsis, diphtheria, and other infectious processes in the mouth or throat may be confused with acute leukemia, but the hematologic and bacteriologic findings usually serve to differentiate these diseases rather quickly.

Aplastic anemia and acute agranulocytosis are the two most important conditions with which the leukopenic variety of acute leukemia may be confused. The absence of evidences of red cell regeneration and of immature leukocytes in the blood usually serve to distinguish aplastic anemia from acute leukemia. In doubtful cases, biopsy of the bone marrow may serve to settle the issue. Acute agranulocytosis generally does not show the anemia or thrombocytopenia of acute leukemia; occasional cases, however, may show depression of all the formed elements of the blood. Immature leukocytes in concentrated blood smears would point toward leukemia. Examination of the bone marrow may obscure rather than clarify the problem, since agranulocytosis may be associated with either an aplastic marrow or a marrow showing hyperplasia and maturation arrest at the myeloblast level. In rare instances only careful necropsy study can establish the diagnosis.

The hemorrhagic manifestations of acute leukemia may lead to its confusion with the purpuric states. The demonstration of leukocytic immaturity and rapidly developing anemia will usually serve to distinguish leukemia from the purpuras, however.

The hemolytic anemias, especially during crisis, may occasionally simulate acute leukemia. The more characteristic clinical and hematological features of the particular dyscrasia, such as spherical microcytosis and increased fragility of the erythrocytes in congenital hemolytic icterus, are of aid in differentiation.

Occasionally, in cases of pernicious anemia with erythrocyte counts below two million the hematologic findings may suggest leukopenic leukemia. Although macrocytosis may be seen in the latter disease, it is not usually so marked as in pernicious anemia. The presence of increased nuclear lobulation of the neutrophiles in pernicious anemia is another diagnostic aid. In doubtful cases, the parenteral administration of adequate quantities of potent liver extract will settle the question within a relatively short time.

Infectious mononucleosis is a relatively common condition which is often confused with acute lymphatic leukemia. In differential diagnosis, the toxic granulation with a left shift in the neutrophiles and the absence of any considerable numbers of immature lymphocytes in blood smears would point toward the former disease. The lymphoctyes of infectious mononucleosis are characterized more by their atypical morphology than by the features of immaturity, although a few definitely immature cells may be seen. The heterophile antibody reaction of Paul and Bunnell[12] is of great diagnostic value, almost invaribly showing high titers in infectious mononucleosis and low titers in acute leukemia.

The leukemoid blood reactions,[5] produced by a large variety of conditions, present the hematologic and rarely some of the clinical

features of leukemia. Occasionally pyogenic infections, tuberculosis, pertussis, variola, and bacterial endocarditis may produce blood pictures simulating those of acute leukemia. Usually, however, the clinical features of the particular disease are sufficiently distinctive to indicate the correct diagnosis. Downey and his associates (1930)[3] have reported myeloid blood pictures in cases of mercury poisoning and Parrisius and Heimberger (1923)[11] have recorded cases due to bee stings in which the blood picture simulated acute leukemia.

Neoplasms in the bone marrow, either primary such as multiple myeloma or Ewing's tumor, or secondary as in metastatic carcinoma from primary tumors in the prostate, breast, kidney, or thyroid gland may produce leukemoid blood reactions. Generally these reactions are more likely to simulate chronic than acute leukemias. The symptoms referable to the tumor growth plus the findings on radiographic examination usually suffice for accurate diagnosis. In multiple myeloma the demonstration of Bence-Jones proteinuria is of considerable diagnostic significance.

Osteosclerosis, a condition in which the marrow cavity is obliterated by an overgrowth of bone, may give rise to leukemoid blood reactions, but the radiographic findings are usually diagnostic of the condition.

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ABSTRACT OF DISCUSSION

Dr. Roy R. Kracke, Atlanta, Ga.: Here is a disease that once the diagnosis is made absolutely nothing can be done about it. It is always an unfortunate disease, occurring usually in children, and these are the most pathetic cases that the physician is called upon to see.

Is acute leukemia a neoplastic or an infectious disease? That is a point which I have never been able to settle in my own mind. I used to believe it was similar to other types of leukemia, but in recent years I am inclined to doubt that. I have seen too many cases of children, apparently healthy, suddenly become ill with typical findings of leukemia, in every way the condition simulating an infectious disease, so I am inclined to wonder if we, as pathologists and research workers in medicine, are doing our duty with respect to investigative work in acute leukemia. Should we not be more vigorous in our attempts to find a solution to this, which seems to be the greatest problem in hematology today? It seems to me that this is a great problem for the chemist. From a pathological standpoint it is perfectly obvious that the bone marrow activity is not retarded but something happens to the normal maturation of the white cells in the marrow, so they are unable to maturate to full maturity. In other words, the cell potential is all given over to the process of reproduction at the expense of maturation and that takes us into the field of cell respiration.

We know that these are hopeless, fatal cases, and there is no question about that. I do not believe that a child with acute leukemia has ever recovered. In view of this I would like to urge a more courageous attitude in experiment on these patients. It is our only opportunity for experiment since we can't produce this disease in lower animals, so I think that any type of rational experiment that the investigator chooses to carry out is justified. We know that whatever we do to the patient will be no worse than what is going to happen anyway. The current methods of treatment of acute leukemia are entirely unavailing, although we usually give repeated transfusions or anything else that anybody suggests, all of this, however, being done with a sense of futility rather than hope.

Dr. F. J. Heck, Rochester, Minn.: I should like to emphasize what Dr. Kracke has said regarding treatment. Unless we have something new to offer, or unless we are willing to try something new, I cannot see that the ordinary routine treatment which has been suggested for acute leukemia is worth while. Unless we are going to try some new procedure, we uniformly send these patients home because, from an economic standpoint, and from the standpoint of the parents, it is much easier to have the agony over with in a hurry rather than attempt to prolong the life of the child by repeated transfusions.

In regard to Vincent's infection, I should like to urge that every patient, and particularly the child who has what appears to be a Vincent's infection, have a careful study of the blood. I am certain that cases of leukemia will be diagnosed earlier if we follow such a procedure. So far as specific diagnosis is concerned, once we have made a diagnosis of acute leukemia we are not particularly interested in definitely classifying the type. I think it is of importance if we could show that certain types of acute leukemia have recovered. As a matter of fact, we have yet to see a single case of leukemia of any type recover, and it would be interesting to review those cases in which recoveries are said to have occurred. I realize that some of the cases of chronic leukemia may live

twenty or twenty-five years, but they are few and far between. At the present time there is much unfavorable newspaper publicity in many parts of the country in regard to the treatment of cases of acute leukemia, and appeals being made to the public for the donation of blood from cured cases.

We have such an example in Minnesota where they are treating a child in one of the smaller towns. We happened to have made a diagnosis of acute leukemia, but we still happen to know that that child, even though having gone nine months, still has a blood picture of acute leukemia.

In regard to the frequency of occurrence, I can't help but feel that leukemia is a much more common disease than we are taught in medical school. We hope to be able to answer that question in part in the next year, because we are in a position to have reasonably accurate figures, since we are located in a county of a total population of around 35,000, and since we do see most of the cases of leukemia we hope by a comparison of our figures with the death rate from leukemia in our county to get some idea of the frequency of occurrence.

As far as heredity is concerned, we have only seen three instances in which more than one case of leukemia has occurred in the same family. Two of those happened to be sisters, but they occurred at intervals of five to six years, and one was a chronic type and the other acute, so it is difficult to feel that there is anything from an hereditary standpoint.

As far as marrow aspiration is concerned, I do think that sternal aspirations are of definite benefit in a certain number of cases. It will confirm a questionable diagnosis in instances in which there are only very occasional immature cells, but in which we are confronted with an undiagnosed anemia. Not that it will always do so, and I am sure that those of you who have done sternal aspirations have had the same problem that we have had, in that a certain number of sternal aspirations are failures. As far as the buffy coat smear is concerned, I can't help but feel that it is of decided advantage. Many times through its use it will be quite unnecessary to carry out the procedure of sternal aspiration.

Dr. E. J. Ashcraft, Harlingen: I come from down in the tropical country. May I ask if these doctors think that the tropical country makes any difference; I mean the mild climate? We have lots of leukemia and lots of anemia, especially among men. And, may I ask, does age have anything to do with it?

Dr. Heck (replying to Dr. Ashcraft): I do not believe age has anything to do with leukemia except that the majority of acute cases occur before the twentieth year.

We have compared our series of cases with those reported in the literature and are in agreement that males predominate in a ratio of about two to one.

There is a definite peak in the chronic cases coming in the fourth and fifth decades. In acute leukemias occurring in childhood approximately 40 per cent of our cases have a leukocyte count of 12,000 or below. Of the total number of cases of acute leukemia of all types, approximately 50 per cent occur in childhood. Each year we do see two or three chronic cases, either lymphatic or myelogenous, just as we see in adult life.

SCHOOL-TEACHERS AND TUBERCULOSIS

While the school-teacher has not more tuberculosis than the average adult, next to the family she provides the greatest opportunity for close prolonged contact with the school child. To require the teacher to provide a health certificate, including chest films, would serve to remove this reservoir of infection.—D. O. N. Lindberg, M. D., Illinois M. J. (Oct.) 1935.

THE DIAGNOSIS AND TREATMENT OF CANCER OF THE PHARYNX*

ARTHUR C. CHRISTIE, M. D.†
(Professor of Clinical Radiology, Georgetown University Medical School)
WASHINGTON, D. C.

A clear perception of the anatomy and anatomical relations of the pharynx is essential to an understanding of the diagnostic signs and the indications for treatment of cancer of the pharynx.

Gray describes the pharynx as "that part of the digestive tube which is placed behind the nasal cavities, mouth and larynx. It is a musculomembranous tube, somewhat conical in form, with the base upward, and the apex downward, extending from the under surface of the skull to the level of the cricoid cartilage in front, and that of the sixth cervical vertebra behind."

A lateral or sagittal view through the pharynx and larynx shows most of the important structures.

A view of the pharynx from behind shows from above downward the body of the sphenoid bone, the choanæ or posterior nares, the soft palate and uvula, the posterior opening of the mouth, the base of the tongue, the epiglottis, the entrance to the larynx, the aryepiglottic folds, the arytenoid cartilages and the muscles and membranes covering the cricoid cartilage.

When one looks directly into the mouth he sees on either side the faucial tonsil lying between the anterior and posterior pillars, and posteriorly the wall of the pharynx at the level of the second cervical vertebra. By tilting the head back or pushing the soft palate up the rounded projection produced by the anterior tubercle on the atlas can be seen.

A mirror view of the nasopharynx shows the vault of the pharynx and the pharyngeal tonsil if present, the orifice of the eustachian tube on either side and the choanæ with the posterior aspect of the turbinates and the nasal septum.

The mirror view of the larynx shows the epiglottis, the vestibule of the larynx, the true and false cords with the ventricles between them, the aryepiglottic folds and the uppermost aspect of the piriform sinuses.

It is thus possible to examine the pharynx in almost its entire extent, the only part completely hidden from inspection being that part immediately behind the larynx. Even that part can be viewed directly through the esophagoscope.

Roentgenography of the pharynx is now developed to the point where it furnishes

†From the Radiological Clinic of Drs. Groover, Christie and Merritt, Washington, D. C.
*Read before the Section on Radiology and Physiotherapy, State Medical Association, Dallas, May 15, 1940.

much additional aid in diagnosis not only of the presence of pharyngeal lesions but of their extent and their involvement of and relation to adjacent structures. Lately tomography has brought further aid in the study of these lesions.

The structure of the mucous membrane of the pharynx determines not only the type of malignant lesions which occur there but also their clinical manifestations and their response to treatment. Although the lining epithelium of the pharynx is of the squamous cell type, the same as that of the mouth, it is composed of a very thin layer of cells and is underlain by a comparatively thick layer of loose areolar connective tissue in which are seen wide lymphatic spaces and masses of lymph follicles. The predominance of lymphoid elements and their extension from the areolar layer into the epithelial layer is a striking and important characteristic.

Corresponding to this normal structure there are three main types of malignant tumors found in various locations in the pharynx: (1) carcinomas arising from the squamous cell epithelium; (2) lymphosarcomas arising from the lymphoid elements; and (3) lymphoepitheliomas arising from the lymph-epithelium. The carcinomas may be very anaplastic on the one hand or differentiated on the other, just as is the case in other localities. They have a lesser tendency, however, to differentiation than do carcinomas of the mouth. This is an important fact which has a direct bearing upon their response to treatment.

The lymphosarcomas arising in the pharynx are likely to metastasize early to distant parts of the body, due to the nature of the tumor and to the loose areolar structure in which they arise, and its great vascularity. The first manifestation of the presence of lymphosarcoma in the pharynx may be a large tumor in the abdomen or posterior mediastinum.

Lymphoepithelioma was originally described in 1921 and since then has been repeatedly recognized as an important malignant tumor of the pharynx. It was originally thought to be an endothelioma but its association of epithelial cells with densely infiltrating lymphocytes is rather characteristic. One of its most important clinical features is its early metastasis to the cervical lymph nodes. The first manifestation of its presence may be an enlarged gland in the neck.

Because of the different clinical manifestations of these neoplasms as they occur in different localities in the pharynx, it is necessary to discuss them separately for the nasopharynx, mesopharynx and hypopharynx.

Referring again to anatomical considerations, the nasopharynx is that part of the pharynx extending from the base of the skull down to the level of the soft palate. Any one of the three histological types of tumor which I have mentioned may occur in this region. Their predominant characteristic is their highly cellular structure. Even the carcinomas are likely to be anaplastic. This renders them favorable for radiation therapy but also causes them to metastasize early.

It is necessary here to recall the lymphatic connections in this region. The nasopharynx has much of its lymphatic drainage into the retropharyngeal lymph nodes. These nodes in turn connect directly with the glands in the deep cervical chain. The first clinical sign of the presence of a malignant growth in the nasopharynx may be an enlarged gland just below the mastoid process, under the sterno-cleido-mastoid muscle or even posterior to it. A little later, glands lower down may be involved but they are always observed in a posterior location under or posterior to the sternomastoid muscle. The possibility of enlarged glands in the neck is a point worth emphasizing because when present they may have great clinical significance. When such glands are discovered, examination of the nasopharynx must not be neglected and it must be remembered that the primary growth in the nasopharynx may be small and difficult to discover even after metastasis has occurred.

The symptoms of a tumor in the nasopharynx depend largely upon the location of the growth. If it is at the orifice of the eustachian tube there may be tinnitus, diminished hearing or feeling of fullness in the ear. If there is erosion or ulceration the first symptom may be nasal bleeding. Obstruction to breathing may be the first noticeable symptom. When the tumor is located high in the vault of the pharynx at the base of the skull its extension may produce a great variety of symptoms dependent upon the particular nerves involved in its growth. If it invades the skull in the region of the cavernous sinus, as frequently happens, it produces various eye symptoms such as ptosis and diplopia. It may grow through the sphenoid bone and involve the optic nerve with consequent failing vision or blindness in one eye. Trigeminal neuralgia is not uncommon, and when the ninth, tenth, eleventh or twelfth nerves are involved there may be various other neurologic symptoms such as paresthesias and paralysis of muscles or groups of muscles. Horner's syndrome occasionally occurs when the cervical sympathetic is involved.

The early diagnosis of nasopharyngeal tumor therefore depends upon attention to

symptoms such as nasal hemorrhage, localized pain, ocular, aural and neurologic manifestations which of themselves may seem of little importance. When the presence of the growth is suspected mirror inspection of the nasopharynx may reveal it even when it is small. A lateral roentgenographic view is often of value to show both the presence and extent of the growth. The significance of enlarged glands in the neck must not be minimized.

Nasopharyngeal fibroma, which has been thoroughly studied by New, is not in the true sense a malignant tumor. Histologically it is a highly cellular fibroblastic tumor resembling sarcoma, but it does not metastasize. It may arise anywhere in the nasopharynx, is of cartilaginous hardness and does harm by its steady growth, producing obstruction and destruction of surrounding structures by pressure. It is very vascular and bleeds freely if traumatized and is therefore impossible to eradicate surgically. It occurs in childhood and up to the end of adolescence when it retrogresses spontaneously. The problem is to hold in it check until this time comes, which can be done by the careful repeated application of radiation therapy in moderate dosage.

The mesopharynx is that part of the pharynx extending from the soft palate to the opening of the larynx. Malignant new growths may occur in any of the structures composing it, namely, the soft palate, pillars of the tonsils, the tonsils, the base of the tongue and valleculae, the posterior and lateral pharyngeal walls and the lingual face and free borders of the epiglottis.

The principal tumor of the tonsil is epidermoid carcinoma. The most important point to emphasize with regard to this lesion is its highly cellular, undifferentiated structure and its consequent ready response to irradiation. Even though the lesion may be ulcerative and may have destroyed one or both pillars in whole or in part and have already produced an excavation in the base of the tongue and enlargement of cervical glands, it is still possible in a good percentage of cases to bring about a cure by irradiation.

Both lymphoepithelioma and lymphosarcoma occur in the tonsil, but much more rarely than carcinoma. They are not so likely to ulcerate as carcinoma but extend to the cervical glands or more distant parts very early.

Tumors of the anterior pillar or the soft palate are quite different from those in the tonsil itself in that they are nearly always highly differentiated and have a tendency to early infiltration into deeper structures. When the lesion as originally seen is very extensive, involving structures well beyond the pillar, it may be impossible at first to decide its point of origin. Only after treatment by irradiation when a small lesion remains on the anterior pillar or soft palate is one aware of its differentiated and highly resistant nature.

It must be remembered that the prognosis is much worse in carcinomas arising from the palate and anterior pillar than in those arising from the tonsil itself. The lesions which arise from the posterior pillar and extend into the lateral pharyngeal wall as well as those arising from the lateral and posterior walls of the pharynx are usually less highly differentiated than are those on the anterior pillar and are therefore more sensitive to irradiation.

The first noticeable glandular enlargement arising from lesions of the tonsil is likely to be at the angle of the jaw.

Of all the tumors of the mesopharynx those of the valleculae and the lingual face and free borders of the epiglottis are the most favorable for treatment. Even though they may extend into the preepiglottic space and rupture anteriorly when they become infected they may still respond readily to irradiation. A tumor is sometimes mistaken for a lesion of the epiglottis or valleculae. Such tumors may even extend into the preepiglottic space.

There remain to consider very briefly, although it is a large subject, the lesions of the hypopharynx. The prognosis in these lesions, just as in those of the other regions of the pharynx, varies with their site of origin. On the superior portion of the aryepiglottic fold the lesion is of the undifferentiated type and the prognosis is much the same as for those on the free borders of the epiglottis, that is, they are likely to respond to irradiation. If, however, the lesion originates lower down at the level of the arytenoid cartilage, or especially if it has its origin in the piriform sinus it is quite certain to be highly differentiated and therefore resistant to irradiation.

The diagnosis of carcinoma of the piriform sinus is not easy. There is usually a history of dysphagia and local pain and tenderness. Laryngoscopic examination is usually unsatisfactory because only the uppermost part of the growth can be seen just lateral to the aryepiglottic fold. Lateral soft tissue films of the region are often very useful. It is sometimes possible by such films to show that a tumor which is visible in the laryngoscopic mirror in the vestibule of the larynx really originated in the piriform sinus and has penetrated into the larynx.

TREATMENT

I shall discuss the treatment of malignant lesions of the pharynx briefly and in a summary way without going into detail. These lesions are practically all outside the domain of surgery because they do not remain localized long enough to permit of local extirpation. Even those of the tonsil, which can be removed, invariably recur and the death of the patient is hastened by operation.

The treatment of choice for all malignant pharyngeal tumors is external irradiation by means of the x-ray. The total dose to be given varies from 6,000 to 8,000 *r*'s measured on the skin. I prefer to give the total dose over a period of about twenty-eight to thirty-six days. Others prefer a smaller daily dose and some use a total dosage somewhat larger than I am accustomed to give.

The prognosis in lesions of the pharynx varies with the type and site of origin of the tumor, which are more important than the size of the primary lesion or the presence of adenopathy.

In general one may state that lesions in the following locations are radiosensitive: the nasopharynx, the tonsils, the posterior pillars, the lateral and posterior walls of the mesopharynx, the valleculae, the lingual face and free borders of the epiglottis and the superior portion of the aryepiglottic folds. In these locations one may expect a high percentage of cures from external irradiation. Even in these cases, however, the prognosis is greatly modified if there is bone involvement or fixation of involved glands to the mandible or other deep underlying tissues. The prognosis is of course always conditioned by the possibility of distant metastasis, which is highly probable in lymphosarcoma and less so in the carcinomas. The treatment for the more resistant types of neoplasms of the pharynx is primarily external irradiation just as in the radiosensitive types. An occasional cure is secured even in the highly resistant carcinomas at the base of the tongue and in the piriform sinus. Those in the anterior pillar and base of the tongue may show marked regression under external irradiation in maximum permissible dosage. If a small unhealed area remains in the base of the tongue or on the anterior pillar or soft palate complete regression may be obtained by electrothermic destruction of the unhealed area. We prefer this method in our own practice to the implantation of radon seeds which we formerly used.

An additional reason for treating all lesions, even those which presumably are radioresistant, is the fact which I have already mentioned, that it is impossible to determine at first the site of origin of a particular lesion. It may involve the tonsil and pillars and even the soft palate but if it has its origin in the tonsil it is likely to be very radiosensitive. Similarly a lesion may involve the piriform sinus and the aryepiglottic fold but if it has its origin in the latter it may respond completely to irradiation. Even those lesions which originate in the piriform sinus occasionally show complete regression but they are prone to recur locally even after two or more years.

Radiologists have learned by experience that the cellular structure of a tumor is not sufficient evidence upon which to base judgment of its radiosensitivity. The tumor may show considerable histological differentiation and still prove to be highly radiosensitive. The vascularity and structure of the tumor bed undoubtedly have much to do with the radiocurability of malignant tumors. The only way to determine radiosensitivity is to treat all malignant lesions of the pharynx by external irradiation unless they are definitely beyond hope of palliation.

A point of great importance in radiation treatment of lesions of the pharynx is to make sure that the lesion in its entire extent is treated. A lesion of the hypopharynx, for instance, may extend much farther down into the esophagus than is apparent and the lesions in the vault of the pharynx require that the area treated extend well up to or above the level of the outer canthus of the eye. On the other hand it is important to have the area treated as *small* as possible in order that the maximum dose may be delivered to the lesion without injury to soft parts. For instance, in lesions of the tonsil if one begins with an area about 13 cm. square and gradually reduces it to one above 7 cm. square he can give a much larger total dose than would be possible if the larger area were maintained throughout.

It is rarely if ever advisable to repeat a course of external irradiation after one has given the maximum permissible dose over one of these lesions of the pharynx. Harm may be done and the patient subjected to unnecessary suffering if additional radiation is given when the first course fails to cure.

Finally, it must be apparent to every student of the subject that malignant disease of the pharynx presents a complex and difficult field for both diagnosis and treatment. When it is recalled, however, that before about the year 1920 cancer of the pharynx was considered a hopeless disease it will be realized that tremendous advance has been made in the twenty intervening years.

I have not attempted to present new material in this paper but have tried to show that accuracy in diagnosis as to type and extent

of the lesion and discrimination in the application of treatment offer great hope for still further improvement in the results obtained up to the present time.

1835 Eye Street, N. W.

ABSTRACT OF DISCUSSION

Dr. Charles L. Martin, Dallas: Dr. Christie has given us an excellent resume of the anatomy of the pharynx and the proper methods for its examination. He tells me that he practiced otolaryngology for several years in his younger days and he has made it evident that all of us could profit by such training.

I have been much interested in the complications observed with malignant pharyngeal tumors. They either extend into the cranial vault producing involvement of many of the cranial nerves, or pass downwards through the cervical lymphatics into the mediastinum where new tumors grow about the lung roots. Every cranial nerve except the eighth may be involved and in such cases the origin of the trouble in the throat is often overlooked. Vertical roentgenograms of the skull will usually show the destruction of the floor of the middle fossa and should be made in all such patients. The primary lesions can be eradicated with divided dose x-ray therapy with ease, but death from metastases is the rule. In my opinion, many of the earlier cases can be cured permanently by thoroughly irradiating the skull, neck and mediastinum before metastases appear. As a rule, a cure is impossible when treatment is given after the secondary lesions appear.

Dr. L. A. Myers, Houston: The paper, in its entirety, smacks of basically sound practicability. The speaker's attack on this important problem is made by carefully balancing the anatomic and clinicopathologic as well as the radiologic factors. Because of two of these factors—the anatomic and histopathologic—this group of malignant diseases lends itself more effectively to radiologic control than almost any other area or group of malignant diseases; and one of these, the histopathologic factor, is probably of the greater influence in radiosensitivity.

There are two main groups which constitute by far the majority of malignant diseases in this area. These are the squamous carcinoma group and the lympho-epithelioma group with its variable admixture which ranges from the true lymphosarcoma to the so-called transitional cell lymphoepithelioma. The lymphoid family of malignant diseases has always been one of the most sensitive groups. This also, but to some less extent, is true of the squamous epithelioma group. The higher percentage of lymphoid tissue, as a rule, renders the tissue more radiosensitive. For this reason radiosensitivity cannot be as accurately determined by cell grading through cell differentiation in this group of diseases. This is also true of the squamous epithelioma. The grades 1 and 2 degree of malignancies are, at times, surprisingly sensitive to radiation. For that reason the most important test of radiosensitivity for this group of lesions is the clinicopathologic response in the early period of treatment and may be applicable in all cases.

Dr. John H. Vaughan, Amarillo: I should like to ask Dr. Christie two questions: (1) Does he think that, by using the intraoral specula in these cases, as employed by Merritt, we may get better results than we do with external radiation? (2) What does he think of Coutard's suggestion "if we give a lethal dose of x-rays to the mother cancer, we can forget the metastasis: They will either stay stationary or recede?"

Dr. Palmer E. Wigby, Dallas: I should like to ask Dr. Christie how many days are consumed in the administration of the 5,600 *r* delivered to the single lateral port used in the treatment of unilateral carcinoma of the pharynx?

Dr. Christie (closing): In answer to the first question of Dr. Vaughan, we have not used the intra-oral speculum in cancer of the pharynx and do not believe that any additional advantage would be found over external irradiation. Replying to the second question of Dr. Vaughan, we think it important to treat the metastases in addition to the primary lesion.

Answering Dr. Wigby, the time of treatment varies from twenty to thirty days.

PRENATAL BLOOD CHANGES*

ROY LEE GROGAN, M. D., F. A. C. S.
FORT WORTH, TEXAS

When Mauriceau issued his famous epigrammatic saying that "pregnancy is a disease of nine months duration" he based his observation on the gross physical symptoms he could then observe. There were no laboratories. De Lee[1] states that pregnant women ought to feel as well as during the non-pregnant state. One sees many patients who feel better during pregnancy, yet there are many who do not feel at all well. If irritable she seems to be made more so, if there is a tendency to have melancholia it is frequently exaggerated, and so forth. What physician has not had the occasional patient who runs the gamut of neuralgias—"catches in the hips," feeling of weakness, and external changes from crops of warts to hemorrhoids, especially the latter. Metabolism is changed to meet the new demands on the body which must not only be sufficient for herself supplying a growing fetus with water, oxygen, food, minerals and vitamins, but also receiving from the fetus its waste products converting them into harmless elements for elimination. These latter changes call for increase in the volume of blood as well as an increase in its formed elements. This discussion will be limited to the influence of pregnancy upon the erythrocyte and hemoglobin level.

It has been recognized[5] since 1931 that the blood of normal non-pregnant women has usually a lower hemoglobin level than that of men. It has been explained that this condition is a type of mild but true anemia. Widdowson[7] from the University of Cambridge conducted an experiment using normal men and non-pregnant women. Observing the hemoglobin levels he found that the hemoglobin of women approached that of men after the administration of inorganic iron while that of men did not rise, and subsequently the level of women fell while that of men remained the same. What, then, is the

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influence of female sex hormones on the storage of iron? And though the body of the woman many contain more iron, why does it not reflect in the hemoglobin?

It is a well accepted fact that pregnant women are often anemic and is also to be seen that the administration of iron helps to prevent the lowering and may help to raise the hemoglobin level.[6] Is this change pathologic or physiologic? Within what limits may the blood normally develop? What factors influence the blood picture of pregnancy? Many investigators have presented evidence that there is an increase in water content of the blood plasma. Dieckman and Wegner have established the fact that there is a 25 per cent increase of plasma volume in the blood in the last trimester of pregnancy with a corresponding degree of relative red cell reduction.[2]

The anemias of pregnancy may be divided into two general types: hypochromic, which comprises by far the larger per cent, and the macrocytic which is relatively rare. The hypochromic type refers to that group in which the hemoglobin content is lowered, while the macrocytic denotes enlargement of the red cells. Kracke states the differentiation is satisfactory, for the macrocytic is rarely hypochromic. There is an anemic state of pregnancy which must be mentioned, *i. e.*, pernicious anemia of pregnancy. It is not, however, identical with pernicious anemia because the condition usually disappears with the termination of pregnancy. Kracke states it occurs once in about five thousand pregnancies.

What are some of the factors which influence the blood picture of pregnancy? The condition of the patient's blood prior to her pregnancy; lack of foods which stimulate blood formations and changes in the intrinsic factor must be considered. There is another interesting factor which is a creation of a new and highly vascularized organ, the pregnant uterus on the existing circulation; the fluid changes in the blood stream and tissues, that is, the increased amount of water content in the blood plasma; the growing demands of the fetus; the increase in hemolysis, as indicated by the pigment in the meconium; and lastly the influence of the changed internal secretory functions on the blood forming system. Some of these factors are amenable to treatment, others are not, and there are those factors that we do not deem advisable to control.

Accepting the standard of Labate[3] the pregnant woman having a red cell count of less than four million, or a hemoglobin below 80 per cent, was considered anemic. Approximately 48 per cent of our private cases fall into this category. The figure corresponds closely to that of other observers and roughly 90 per cent of these anemias occurred in the second trimester. The chief subjective symptoms were weakness, dyspnea and palpitation of the heart on exertion. Many complained of gastric fullness. The skin and mucous membranes showed marked pallor. As soon as the anemia was determined the patients were placed on a high protein diet and large amounts of ferrous sulphate. Approximately 10 per cent were given liver extract in combination with iron by mouth, 5 per cent were given liver extract intramuscularly and ferrous sulphate by mouth, and 1 per cent had to have one or more transfusions. When gastric distress was noted dilute hydrochloric acid was added for its relief. Only one of the series had to have a transfusion following delivery while 12 per cent were given ferrous sulphate after a check-up at three months.

CASE HISTORY

Mrs. A. B. O., age 21, whose last menstruation was June 28, 1938, was referred to me February 19, 1940, with a history of having had in her early pregnancy marked nausea and vomiting which continued throughout the fifth and sixth months. The blood count was 4,500,000 red cells and 80 per cent hemoglobin. She made her usual routine visits to her physician and early in February developed an extreme weakness, gastro-intestinal distress with accompanying pallor. A blood count was made by her physician and the findings were 2,500,000 red blood cells and 30 per cent hemoglobin. Immediately ferrous sulphate by mouth was prescribed and liver extract was given intramuscularly.

February 11 she came on my service. Her blood count at that time was 2,800,000 red cells, 35 per cent hemoglobin, 19,000 white blood cells with a non-important differential. She was immediately hospitalized and given 350 cc. of whole blood. Two days later her red blood count was 3,000,000 and hemoglobin 50 per cent. She was given at that time 500 cc. of whole blood. Forty-eight hours later she was dismissed from the hospital with the instructions to take iron sulphate three times daily and ten minims of dilute hydrochloric acid after meals. She progressed satisfactorily until April 2, 1940, at which time a blood count was made, which showed 4,400,000 red cells and 82 per cent hemoglobin. Due to having a justo-minor pelvis and marked fetopelvic disproportion she was delivered by low cervical section, her baby weighing 9 pounds, 3 ounces. Four days later a blood count was made. She had 4,770,000 red cells, 80 per cent hemoglobin, and iron sulphate by mouth was ordered. May 2, 1940, a blood count was made, which showed 4,600,000 red cells and 85 per cent hemoglobin. There were no abnormal findings in the red cells with the exception of a slight hypochromia.

CONCLUSION

1. Normally there is in the non-pregnant woman a lower hemoglobin level than in men; this rises under the administration of reduced iron to approach that of men but falls when the iron is discontinued.

2. It is an accepted fact that pregnant women are often anemic and that iron ad-

ministration helps to prevent the lowering and may help to raise the red cell and hemoglobin level.

3. There are three types of anemias which must be considered: the hypochromic which comprises by far the larger percentage, the macrocytic, and the pernicious anemia.

4. The factors influencing the red cell and hemoglobin level and the pre-existent state of the patient's blood are: a diet lacking the necessary stimulating foods for blood formation and the changes in the gastro-intestinal secretions which prevent proper assimilation of foods as well as frequent changes in the blood stream, increased blood destruction and altered glandular functions which influence the blood productive system.

5. The most rational management of the anemic patient who is pregnant is the administration of iron sulphate, small transfusions and a diet high in protein; that is, meat, eggs and dairy products; and multiple small transfusions of whole blood.

921 Fifth Avenue.

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ABSTRACT OF DISCUSSION

Dr. Roy R. Kracke, Atlanta, Ga.: Mr. Chairman and members of the Section on Clinical Pathology: Since this is my first appearance before this Section, I would like to express my deep appreciation for your courtesy in inviting me here.

As this paper was being presented, several points occurred to me concerning the anemias of pregnancy. In the first place, I thought the title was misleading under the heading of "Prenatal Blood Changes." I was wondering about the experimental method by which one could determine accurately changes in prenatal blood, but I was relieved to learn that this paper concerns the anemias of pregnancy.

The first question I would like to introduce is, "When is a pregnant woman anemic?" and for that matter, "When is any woman anemic?" There are variations in normal blood values in different sections of the country, but I think we must agree that if a woman has 4,000,000 red blood cells per cu. mm. and 80 per cent hemoglobin, that woman is not anemic in any sense of the word and of course requires no treatment for anemia, as such. I have studied several hundred young college women, who are in the prime of life and living under good economic conditions, and I have learned, in my section of the country that the average is 70 per cent hemoglobin, and red cells usually about 4,000,000 per cu. mm. So the question arises, "Is that anemia or is that the normal blood status for a young Southern woman?" After all, women, as a rule, do not indulge in considerable muscular activity, so they actually do not need 5,000,000 red cells and a hemoglobin of 100 per cent. A pregnant woman, of course, is under an additional stress and strain and no doubt needs all blood that she can produce. So then, if a pregnant woman has 4,000,000 red cells per cu. mm. and hemoglobin of 70 per cent, she could be considered anemic. However, I have seen a great many pregnant women with exactly that blood picture go through pregnancy without apparent difficulties.

The anemias of pregnancy can be divided into two classes: hematological and clinical, but hematological classifications are to be preferred. All of these anemias can be divided into the macrocytic and hypochromic types; the former being quite rare in pregnancy, since they comprise only 5 per cent, or even less of the total number. Most all of the anemias are of the hypochromic, microcytic types. This means that nearly every case of anemia in pregnant women should respond to the administration of suitable doses of iron. For this purpose we usually employ fifteen grains of ferrous sulphate a day; if the patient is not having gastro-intestinal difficulties, in which the iron is not retained, this dosage of iron produces relief in that particular group of anemias.

It is more difficult, however, to treat the macrocytic type which, fortunately, is rare. The cause of this particular type of anemia is unknown. It may be a disturbance of the stomach, so that a sufficient amount of hematopoietic substance is not elaborated or not absorbed. Also it may be caused by a deficiency of intake of the extrinsic factor from inadequate proteins, or conceivably could be caused by liver damage associated with pregnancy. It should respond to the administration of liver extract which can be supplemented with larger quantities of yeast. We use yeast because of the work of Lucy Wills, on the tropical macrocytic anemias, in which she has found yeast to be so effective.

An important adjunct in treatment should be the use of a very rich, high protein diet, including a generous allowance of liver, eggs, meat and milk in the diet. This, plus weekly injections of liver extract, and administration of yeast by mouth, should correct a macrocytic anemia, although it does not do so in every case.

Leukocytosis has been known for years to exist in the latter stages of pregnancy. This is usually called a physiological type and its exact cause is unknown, though it could be caused by absorption of products from the fetus. I have never observed a platelet deficiency during pregnancy, nor have I seen a case of hemophilia during pregnancy, since this is considered to be a disease of males, although it is quite true that there is a hemorrhagic disease seen rarely in females that very closely simulates true hemophilia.

It is possible, of course, that some of the anemias of pregnant women could be on the basis of a deficiency of vitamins, or on the basis of hormonal dysfunction. The use of multiple vitamin mixtures at this time is on an empirical basis.

I have studied one patient with myelogenous leukemia who became pregnant and observed her through the course of her pregnancy. The spleen was treated with adequate amounts of radiation and she apparently suffered no ill effects. For those interested in that question there is an entire chapter in Forkner's book on "Leukemia" that is devoted to this single point and the conclusion is that the leukemic patient can go through pregnancy without ill effects, and in some cases there is indication that there may actually be improvement during that time.

I have recently studied another pregnant woman in considerable detail who had congenital hemolytic anemia. At about mid-pregnancy her red cells were only two and one-half million per cu. mm. and hemoglobin 50 per cent. She steadily improved in the last half of pregnancy and came to full term with almost

a normal blood picture, although in such cases the possibility of an erythroblastic crisis must be always borne in mind. A study of the infant has revealed no hemolytic tendencies.

Dr. F. J. Heck, Rochester, Minn.: Not very much is known regarding the effect of the endocrines on the blood. Certainly it seems reasonable that there is some very careful chemical control as far as production of red blood cells and leukocytes is concerned, but I haven't seen anyone who has made any really good suggestions as to what it might be. I don't think there is much question but that the next twenty-five years ought to give us the answer.

One of the points I hesitate to mention very much is parenteral iron therapy, but it does seem to me that there are only rare cases in which one is justified in making use of parenteral iron therapy. The difficulty is in its unwarranted use, because in the great majority of instances it can be given at much lower cost orally and without any inconvenience to the patient. In those patients who have pernicious vomiting of pregnancy, or who have marked diarrhea, or something of that kind, parenteral therapy may be of distinct value. I can't agree with some authorities who say that giving iron parenterally opens the patient to a great many dangers. Whether it is given intramuscularly or intravenously is up to the individual. Certainly many of the intramuscular preparations cause pain, but there are several on the market which may be given intravenously with very satisfactory results and without reaction. One of these is iron ascorbate, and the other is colloidal iron, which has been used extensively by Whipple and Robscheit-Robbins in their experimental work.

In multiple pregnancies there is greater tendency for the mother to develop anemia. If we assume that the fetus requires between three and four-tenths of a gram of iron, and that the mother, in addition, requires an extra three-tenths gram to make up for blood loss, it means that the mother must have six-tenths of a gram of iron during her pregnancy in order to maintain a proper balance. With the vomiting of pregnancy, and other incidents which may occur, very frequently we cannot expect a woman to absorb this much iron. That is all reflected in the infant, and it is known that children born of anemic mothers tend to have more anemia and that prematurity in infants predisposes to anemia, since iron is stored in the fetus, particularly after the seventh month.

As far as liver extract and the anemias are concerned, I have taken a very arbitrary and probably dogmatic viewpoint, in that I believe a hypochromatic anemia should be treated with iron alone. I don't believe there is satisfactory evidence up to the present time that would give us sufficient support to use the highly concentrated and purified liver extracts regularly in the treatment of the hypochromatic anemias. As far as the macrocytic anemias are concerned, it seems to me that Wills has presented a point which may be of importance, and that is the use of crude liver extract. After all is said and done, we know very little about the primary cause of macrocytic anemias. We know that there are deficiencies, but the exact deficiencies are unknown, and Wills has corroborated work done in England showing that there is a factor in crude liver extracts which improves the tropical, or nutritional macrocytic anemias, at least experimentally, in which the highly concentrated liver extracts will not help.

As far as the vitamin side is concerned, I don't think there is any question but what we must consider the vitamins. It is well known that in the anemia occurring in scurvy no improvement occurs unless vitamin C is supplied.

Recently there has been experimental work done, which has not been demonstrated clinically as yet, on a substance which is called anti-dermatitis factor B_6, which in experimental animals will produce the same type of anemia, and the administration of this factor I, or anti-dermatitis $B_{,6}$ will very promptly relieve the anemia in the experimental element.

Our experience in the more rare anemias of pregnancy is extremely limited. My own experience with leukemia is exactly that of Dr. Kracke's. We have seen patients go through pregnancy without any particular harm as far as their leukemia is concerned. One experience recently was the development of a very severe anemia in a case of hemolytic jaundice but the patient got through her pregnancy successfully.

THE MANAGEMENT OF CERTAIN PERFORATING WOUNDS OF THE EYEBALL*

REPORT OF CASES

E. M. SYKES, M. D.
SAN ANTONIO, TEXAS

This paper is concerned with two types of eye injuries: first, those in which a perforating wound has been produced without the retention of the traumatizing agent, and second, those in which the foreign body is still present within the globe. A brief resume of the subject will be presented, together with the salient facts of a few cases which have come under my care.

In injuries of the globe the physician is frequently confronted with the problem of whether the eyeball should be enucleated immediately or whether an effort should be made to save it without undue risk of sympathetic ophthalmia. The points in question to be considered are the degree of vision remaining, the position and extent of the wound, the presence of intra-ocular hemorrhage, the position and condition of the lens, the degree of loss of the ocular contents, and lastly, to those who believe in Elschnig's theory, the intradermal reactions to uveal pigment.

In the absence of light perception there would be little use in trying to save the globe. If there is an extensive wound in the region of the ciliary body, or any place in the uveal tract which might set up a sympathetic ophthalmia, or if there is an extensive loss of the ocular contents or a massive intra-ocular hemorrhage, removal of the eye would be surely indicated. A prolapse of the ciliary body or choroid and the retina into the wound, or an extensive loss of vitreous, would demand the consideration of an immediate enucleation.

Careful x-ray studies should always be made in all cases of perforating wounds of the eyeball whether or not an intra-ocular foreign body is suspected. If there is any

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doubt as to whether the foreign body is within the eyeball itself or just out of it, Spackman's method of injecting air into Tenon's capsule, and taking radiograms afterwards, will enable one to see the correct position of the traumatizing object. A simpler and safer method is to take various roentgenograms of the eyeball, rotated in different directions, so that if the foreign body is located intra-ocularly, it will be shown in different positions.

If seen soon after the accident, magnetic bodies can generally be removed through the anterior route. Later on, cicatrization and encapsulation may make their removal difficult by any method. Removal through a posterior sclerotomy is to be done only when absolutely necessary. This method is used for the extraction of foreign bodies which are non-magnetic or for encapsulated magnetic foreign bodies which cannot be moved with a magnet. The possibility of a traumatic cataract developing by using the anterior route is so much less than that of a retinal separation from doing a sclerotomy that the former procedure is considered preferable.

FIG. 1. (Case 1).—J. P. B., a white man, age 52. Corneal perforation, right eye, caused by a nail. The wound was covered with a conjunctival plastic procedure. The final result was 20/20 vision with correction.

However, on the other hand, if the retina adjacent to the sclerotomy wound can be made to adhere firmly to the underlying choroid by the immediate use of diathermy, applied by means of Walker needles, thus preventing subsequent detachment, the posterior route should be the method of choice.

For the removal of foreign bodies which are fixed and encapsulated, even if radiopaque, and which are not visible with an ophthalmoscope, the use of biplane fluoroscopy has been recommended as being of great value.

The prevention of sympathetic ophthalmia is still a great cause for worry in ocular injuries. Until the pathogenesis of this dread complication has been cleared up, the eye surgeon should always remember that many a patient has gone blind because of temporizing and experimenting with doubtful cases.

The reports which came in from different countries following the first World War showed an amazing reduction in the incidence of sympathetic ophthalmia. It has been considered that this was due to two reasons: first, that all eyes with wounds considered dangerous were immediately enucleated; second, that it was a routine procedure to administer antitetanic serum in all cases of injury, ocular or otherwise. In fact, it has been asserted by some that

FIG. 2. (Case 4) Left.—Low power microphotograph of sympathogenic uveitis in a white boy (J. S.), age 8. The lesion is located in the ciliary body near a perforating wound.

Right.—Section of the eyeball in Case 4, done by the Army Medical Museum. c. b., ciliary body; l. c., lens capsule; i, iris; c, cornea; w, site of perforating wound; s. a., area of sympathetic ophthalmia; o. n., optic nerve.

in cases where antitetanic serum has been administered, ophthalmia sympathetica has never occurred. In the only case in my series of eye injuries which developed sympathetic ophthalmia in the injured eye, antitetanic serum had not been administered. On the other hand, there were other cases having dangerous wounds that never developed sympathetic ophthalmia and had not received the benefit of antitetanic serum.

If it has been decided that an effort should be made to save the eyeball, especially if the wound is in a dangerous region, close contact should be kept with the patient many years thereafter. Eye ground and slit lamp examinations should be made at the slightest evidence of ocular irritation or lowered vision. It is generally recognized that the earlier the wound is cleansed and brought together by sutures, conjunctival flaps, or both, as well as the early removal of foreign

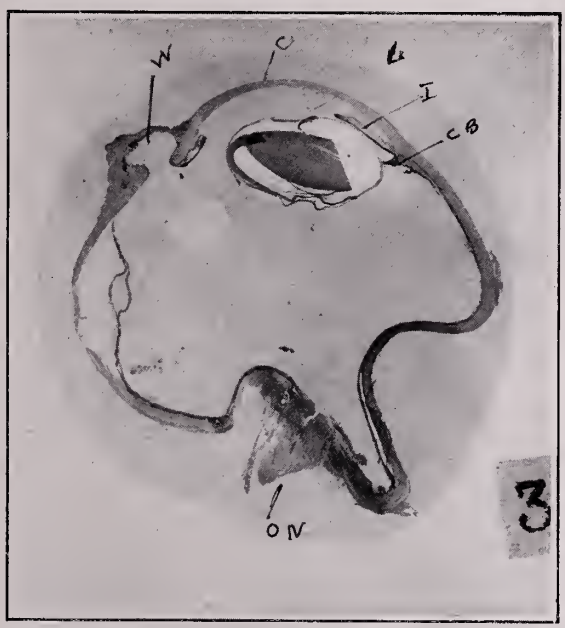

Fig. 3. (Case 5).—Section of eyeball made by Army Medical Museum showing traumatic rupture of sclera with herniation of ciliary body and vitreous, and secondary glaucoma. w, region of wound showing herniation of ciliary body and vitreous; c, cornea; l, lens; i, iris; c. b., ciliary body; o. n., optic nerve.

bodies, the possibility of saving the eye from destructive complications is considerably enhanced.

In addition to the surgical procedures demanded in each individual case, the eye is put to rest, a mydriatic used, or not, according to the surgeon's judgment, and nonspecific therapy, such as milk injections or intravenous injections of diluted typhoid vaccine, are done to reduce the possibility of intra-ocular suppuration. Since the advent of chemotherapy for streptococcic and other infections, sulfanilamide should be used routinely for it may even prevent the sympathetic type of uveitis.

As regards the use of a mydriatic, it is recommended that homatropine be used, alternated with eserine or pilocarpine, especially in the presence of a traumatic cataract to prevent an uncontrollable hypertension.

Sympathetic ophthalmia did not develop in any case which was given a subconjunc-

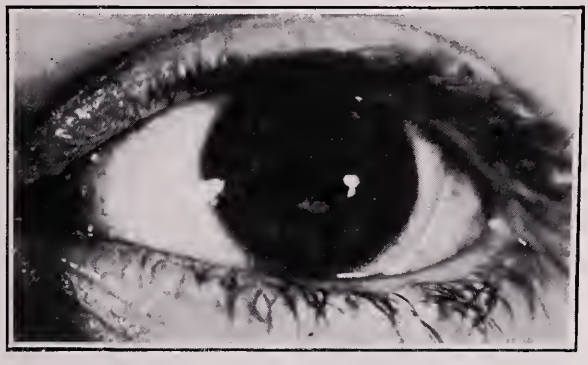

Fig. 4. (Case 6).—V. E., a white boy, age 8, had a perforation of the eyeball caused by a sharpened file. A conjunctival plastic operation was done. Traumatic cataract was gradually absorbed. This photograph of the eye was made eight months after the injury. The final result was 20/30 vision with correction.

tival injection of 1 to 3 cc. of a cyanide of mercury solution, 1:5000, at the time of the reparative work. One cannot say whether or not this was coincidental.

In many cases of perforating wounds of the eye, both with and without the retention of foreign bodies, traumatic cataracts develop. This constitutes many times a real problem, particularly if secondary glaucoma follows. It has been my policy to be patient with traumatic cataracts, especially in young patients in whom absorption is more rapid and there is consequently less tendency to glaucoma. Most traumatic cataracts in patients even up to 40 years of age will undergo a spontaneous absorption and there will be enough separation in the anterior capsule to give good vision in the majority of cases. If any opacity of the lens capsule persists, a discission will suffice to restore the vision satisfactorily. When intra-ocular hypertension of over 40 McLean, associated with pain and congestion, persists after twenty-four hours in spite of all medicinal efforts, it then becomes necessary to perform a linear extraction to wash out the lens material which has fallen into the anterior chamber and clogged up the spaces of Fontana.

In cases of traumatic cataract, lens antigen, 0.5 cc., administered every other day during the course of the absorption of lens substance, may prevent an ophthalmitis phaco-anaphylactogenica.

CASE REPORTS

(Perforating Injuries in Which the Foreign Body Is Not Retained)

CASE 1.—J. P. B., a white man, age 52, was driving a nail which on being hit obliquely, flew up and perforated the right eyeball. The nail was pulled out by the patient himself.

When the eye was seen three days after the accident, a marked edema of the eyelids and conjunctiva, and a pronounced injection of the ciliary and conjunctival vessels, especially on the temporal side, created a very unfavorable impression. There was a horizontal linear wound of the cornea and sclera 5 mm. long, situated near the limbus at 9 o'clock. The iris was prolapsed and covered over with a dirty plastic exudate. The edges of the wound had a dirty gray appearance, and there was some infiltration and clouding of the adjacent cornea. The iris appeared muddy, and numerous blood clots were seen in the lower part of the anterior chamber. The fundus could not be seen.

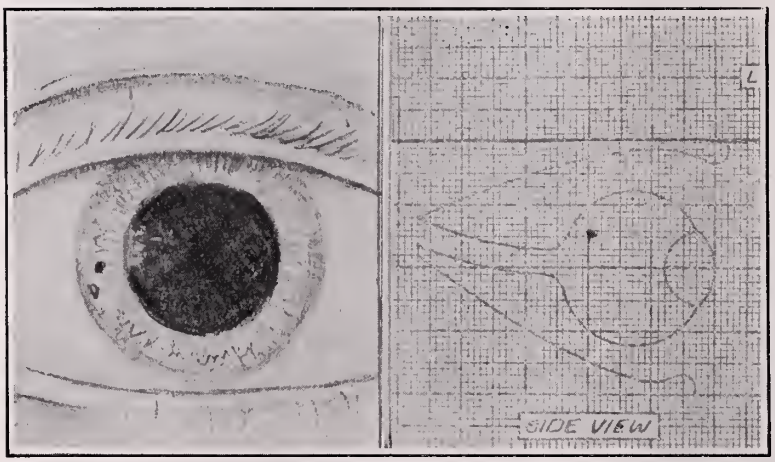

FIG. 5. (Case 12).—R. L., a white man, age 40, had a perforation of the eyeball caused by a metal chip which was extracted with a magnet by the anterior route. Persistent hypertension (60 McLean) was reduced to normal by iridectomy. Traumatic cataract, which developed afterwards, was gradually absorbed. The end result was 20/40 vision with correction.

The wound was cleansed and irrigated with 1:10,000 cyanide of mercury solution. The prolapsed iris was excised and a conjunctival plastic operation was done. The patient was given a prophylactic dose of antitetanic serum, and later typhoid vaccine, 1:10, 15 minims intravenously.

The eye healed without complication and became very quiet. There were apparently no unfavorable sequelae with the exception of an adhesion which still existed between the iris and cornea, and some corneal scars. Vision was 20/30, corrected to 20/20 with a plus 0.50 cylinder, axis 90. No hemorrhages or lesions in the vitreous could be seen, and the lens remained clear.

CASE 2.—W. W., a white boy, age 18, injured his right eye while cutting down some mesquite bushes. One of the branches flew back and hit him in the right eye. An examination forty-eight hours later showed a wound in the center of the cornea, 2 mm. in length. The iris was not encarcerated in the wound, but the lens had become completely cataractous and was pushing the iris forward. The wound was cleansed of some debris. Atropine salve was placed in the lower cul-de-sac and the eye covered with a compression bandage.

Six weeks later, however, he began to suffer with pain and irritation in the eyeball. The tension of the eyeball rose to 60 McLean. The atropine was then eliminated and glaukosan was instilled several times a day. Within forty-eight hours the tension had returned to normal, and stayed down thereafter.

Nine months later the opaque posterior capsule was divided, and the ultimate vision became 20/30 with correction.

CASE 3.—G. O., a white man, age 27, ranchman, while riding through the mesquite brush, struck his right eye with a mesquite thorn. The vision in that eye gradually disappeared, and when seen three days later a very rapidly developing cataract was seen.

The irritation and tension increased rapidly, associated with considerable ocular pain. Everything possible was done to relieve the tension, but it rose rapidly to 90 McLean. It was then deemed advisable to do a linear extraction. The central part of the anterior capsule was removed by a capsule forceps and soft lens material was washed out of the anterior chamber. The tension rapidly came down to normal within twenty-four hours. In two weeks, the eye had become very quiet and the patient was discharged. The final vision two months later was 20/20 with correction.

It has been noted that injuries by mesquite thorns produce more ocular irritation than those produced by metallic substances.

CASE 4.—J. S., a white boy, age 8, stepped on a board and a piece of glass flew up and hit him in the right eye, causing considerable pain, lacrimation and loss of vision.

When the eye was first examined five days later, an irregular triangular wound of the cornea was seen in the region of the limbus at about 3 o'clock. The wound extended 2 mm. into the sclera and was filled with prolapsed iris which was covered with a fibrinous exudate. The lens was becoming cataractous. It was also noticed that there was some purulent secretion in the lower cul-de-sac.

The eye was irrigated thoroughly with cyanide of mercury solution, 1:10,000. The wound was cleared of prolapsed iris and a total conjunctival plastic operation was done to cover the wound. Within three weeks all ciliary and conjunctival injection disappeared and the eye apparently became very quiet. There was no hypertension, and the lens material was absorbing without any evidence of intra-ocular irritation. The patient was then allowed to go back home, some hundred miles distance from San Antonio.

A month later the patient returned, saying the eye had become painful and was tearing, and there was some swelling of the lids. Examination showed an accumulation of pus cells and lens material in the lower part of the anterior chamber. There was a marked ciliary and conjunctival injection. The lids had become distinctly edematous. With the slit lamp numerous clumps of cells were seen clinging to the posterior surface of the cornea, with a characteristic triangular arrangement. Sympathetic ophthalmia was feared, so an enucleation was advised and accepted by the parents. The enucleated eyeball was sent to the Army Medical Museum, where Lt. Col. Callendar made the following report:

"*Gross.*—Lacerated wound extending from the center of the cornea into the sclera. No lens seen, but the capsule appears to be present.

"*Microscopic.*—Open wound at the limbus bordered by a zone of granulation tissue composed principally of plasma cells, monocytes and atypical giant cells with extension of the inflammatory process into the choroid in the form of dense lymphocytic infiltrations. Softened cataractous lens. Dense infiltration of the iris by lymphocytes and plasma cells with a few polymorphonuclear leukocytes.

"*Diagnosis.*—Perforating wound of the limbus. Traumatic cataract. Sympathogenic uveitis."

CASE 5.—P. G., Mexican, age 70, was hit in the right eye by a piece of wood seventeen days prior to examination. Examination showed a tumor-like protrusion about 4 mm. in diameter and 2 mm. in height, dark in color, and situated at 4 o'clock at the sclero-corneal margin. The iris was very muddy in color and was pushed well forward toward the wound. The fundus could not be seen. The tension was 55 McLean. In spite of all treatment the tension and pain increased and became unbearable. Although the patient had a destroyed septum due to a necrosis, the Wassermann was negative. Antisyphilitic treatment was given nevertheless. A sclerotomy gave only temporary relief. Two efforts were made to close over this area but uveal tissue continued to herniate. The dangerous position of the wound, the general inflammatory condition, and secondary glaucoma made it imperative to remove the eyeball.

The eyeball was sent to the Army Medical Museum for diagnosis. Diagnoses of traumatic rupture of the sclera with herniation of the ciliary body and vitreous, and secondary glaucoma due to mechanical obstruction were made.

CASE 6.—V. E., a white boy, age 8, perforated the cornea of the left eye with a sharpened file while cutting initials on a tree. An examination two hours later revealed a horizontal linear wound 4 mm. long, situated near the center of the cornea, in which the iris was encarcerated. The lens had been injured and was becoming cataractous. Under a general anesthetic, the iris was freed from the wound, and a conjunctival plastic procedure was done to cover the whole cornea. Atropine was instilled. The cataract gradually absorbed. Eight months later the posterior capsule was incised, and at the same time an adhesion between the iris and the scar was divided. The end result was 20/30 with correction.

(Intraocular Foreign Bodies)

CASE 1.—A. P. K., a white man, age 23, gave a history of having lost the sight of his left eye after a boxing match. Examination showed that he had a fully developed traumatic cataract. The cataract had a slight, brownish discoloration. The cataract was removed, and in the center of it was found a minute piece of metal which had stained the nucleus of the cataract.

Upon further questioning the patient remembered that six months prior to losing the sight in his left eye, he was hammering on a file while repairing radiators and felt something hit him in his left eye. He said that a piece of metal was removed from the cornea of that eye by a physician. As the patient's history was misleading a roentgenogram was not made. Neither was a slit lamp examination made of the cornea. End result was a vision of 20/30 in the left eye, with correction.

CASE 2.—B. A., a white man, age 28, while chiseling a concrete flooring, felt something hit him in the right eye. When first seen no foreign body could be detected, but there was a small perforation of the cornea not far from the limbus at 8 o'clock, and also a small perforation in the iris, which made one suspicious of a foreign body. Nothing could be seen in the fundus. However, when the pupil was dilated, a small piece of concrete or flint was seen embedded in the anterior capsule of the lens behind the iris at about 1 o'clock. Around this foreign body the capsule and lens material were becoming opaque.

While the pupil was kept dilated there was no pain or reaction, but when the pupil returned to a normal size and the iris functioned normally, considerable intra-ocular irritation was set up (most probably due to the action of the iris rubbing over the foreign body).

It was deemed advisable to remove, if possible, the object causing the irritation to the iris. This was contrary to the usual plan of waiting until the lens became completely cataractous and then removing the foreign body with it. Two attempts were made, and on the second trial a small piece of flint was removed with a special forceps.

The irritation disappeared, but the lens gradually became cloudy. Lens extract in small doses (10 minims) was given hypodermically for a period of sixteen days during the period of cataract development. The patient refused to have the cataract removed. He left town and six months later notified the insurance agent that his vision was returning (probably due to the absorption of the cataract).

FIG. 6. (Case 12).—Appearance of the eye after absorption of traumatic cataract, showing basal iridectomy done to reduce hypertension which appeared before traumatic cataract developed.

CASE 3.—L. T., a white man, age 25, a well driller, was hit in the right eye by a fragment of steel while hammering on metal equipment. This fragment passed through the edge of the cornea, through the iris, around the lens, into the vitreous. A piece of metal could be seen clearly in the vitreous, situated near the retina about 3 disk diameters temporalwards from the papilla. A piece of steel was removed easily through a posterior sclerotomy by means of a magnet.

The immediate results were very happy, the vision at the time of discharge being 20/20 with correction. However, six months later he returned because of loss of vision. An ophthalmoscopic examination revealed that the retina had detached itself in three-fourths of its entirety.

At that time retinal detachments were not treated by electrocoagulation, and the patient did not have the time to be treated according to the methods then in vogue, which, moreover, were useless and temporary in most cases. A similar case would now be handled by doing a posterior sclerotomy with a magnet extraction, and the edges around the scleral wound would be surrounded with a barrage of micro-cautery needles.

CASE 4.—D. L., a white man, age 25, was hit in the left eye by a small splinter of wood caused by the firing of a toy cannon against a post. An examina-

tion showed a small perforation of the cornea near the limbus at 12 o'clock, which had completely closed. In the bottom of the anterior chamber was seen a small, elongated object which was removed through a keratotomy wound at 6 o'clock. It proved to be a wood splinter 4 mm. long. There were no untoward sequelae. The vision was 20/20.

Case 5.—J. D., a white man, age 67, was hammering on a barrel hoop with an old rusty file. Suddenly he felt something hit him in the right eye. An examination at that time showed a small wound in the center of the cornea and the anterior capsule of the lens. Suspecting a foreign body, a roentgenogram was made which showed that there was a very small foreign body situated 16 mm. back from the center of the cornea and 7 mm. below the horizontal plane of the cornea.

The patient was taken to the hospital and the injured eye exposed to the giant magnet. No foreign body appeared in the anterior chamber. A roentgenogram showed that the foreign body had not been moved. It was deemed advisable then to let the foreign body stay in place on account of its small size and the age of the patient. Strangely, a cataract never developed, nor did he suffer from any ocular irritation. The accident occurred three years ago, and the vision has remained 20/40 without correction.

Case 6.—R. G. L., a white man, age 40, was hammering on a rock with a steel hammer and felt something hit him in the left eye. There was a slight amount of pain and the vision became blurred and reddish.

An examination showed a small wound in the cornea, situated at about 8 o'clock near the limbus, and also a small perforation in the iris. When the pupil was dilated, an injury to the lens near its nasal border could be seen distinctly. Intra-ocular hemorrhage and vitreous damage were clearly visible.

A roentgenogram showed a foreign body 0.5 by 1 mm. in size, situated in the vitreous, 18 mm. from the center of the cornea and up 6 mm. from the antero-posterior diameter, and temporalwards about 3 mm.

A foreign body was removed a few hours later through the anterior route by means of a giant magnet. The eye became quiet for three months, and the vision in the left eye remained 20/50. Six months later he suffered a severe cold and then experienced severe pain and marked diminution of vision in the left eye.

An examination showed there was a considerable amount of ciliary and conjunctival injection. The cornea was very steamy. The iris was dilated and the lens was becoming opaque, especially in the lower half. Tension was 50 McLean. It was noticed that the anterior chamber was comparatively deep and the iris was not pushed forward as is generally seen in a glaucoma due to swelling of the lens or vitreous. A slit lamp examination showed some edema of the corneal cells and also a deposit of cells on Descemet's membrane. The iris appeared edematous and there was a considerable amount of blood pigment and inflammatory cells in the meshes of the iris. Obstruction to drainage was evidently being caused by deposits of blood pigment, blood cells and debris in the filtrating angle. Miotics and glaukosan had no appreciable influence on the hypertension.

As the tension still continued high, a basal iridectomy was done. Within forty-eight hours the cornea had cleared, and the eye made a rapid recovery as far as hypertension was concerned.

The lens, however, continued to become cataractous. The patient was given numerous small doses (5 to 10 minims) of lens extract hypodermically daily for twenty doses, and also 5 grains of sulfanilamide, three times a day, for two weeks. Within two months the cataractous lens was absorbed. Without the aid of surgical intervention the vision became 20/40 with correction in spite of many vitreous opacities.

It was advisable in this case not to attempt the removal of the cataract because of the dissolution and liquefaction of the vitreous. The absorption of lens material was unusually rapid and complete for a forty-year-old individual.

1609 Nix Professional Building.

ABSTRACT OF DISCUSSION

Dr. Kelly Cox, Dallas: Dr. Sykes' very excellent paper has outlined the general principles involved in penetrating wounds of the eye. This type of injury is necessarily individual as no two cases are exactly alike. The prognosis is always grave and the handling of the case is necessarily based on one's surgical judgment and experience. I wish to emphasize a few points made in this paper.

First, I wish to emphasize the importance of a very careful history, for by this means we sometimes save ourselves some unnecessary embarrassment. The history frequently points to the identity of the foreign body. I have in mind a case which illustrates another factor in regard to the history.

I saw a man in consultation with a very competent physician in a nearby city; this case was that of a penetrating injury of the eye following the explosion of a dynamite cap. A piece of this copper was recovered by the doctor and a roentgenogram failed to show any other foreign body. A very persistent iridocyclitis was present, and we were inclined to believe this due to the presence of some of the copper until a Wassermann test was done, which proved to be strongly positive, and under energetic antisyphilitic treatment the iridocyclitis promptly disappeared.

Another point worthy of emphasis is the administration of a foreign protein immediatelv, as it seems to be a well established fact that foreign bodies will not generate enough heat to sterilize themselves, as has been previously claimed. The literature is full of cases recording the fact that foreign bodies have been well tolerated in eyes in many instances. This toleration can not be depended on as a principle. We have under observation in our office a case which I have seen from year to year with Dr. Cary, in which a small lead shot is embedded in the lens, and has produced only a slight cloudiness in the area of the shot.

Again I agree with Dr. Sykes, in that all foreign bodies in the globe should be removed by the anterior method when possible. There has been considerable work with the double plane fluoroscope in the removal of non-magnetic foreign bodies; I have not tried this procedure. A very careful localization of the foreign body is necessary in the technique of magnet extraction.

Dr. B. Palmer Woodson, Temple: Perforating injuries of the eye are very frequent in the working class, and constitute something over 5 per cent of all injuries occurring in mines, factories, and railroad workshops; hence their great frequency should warrant compulsory use of suitable eye guards.

If there is a prospect of retaining an eye that will be able to see, and no foreign body is present, the wound is cleansed routinely. However, if the ciliary body or choroid projects into the wound, they should not be excised, since it will result in prolapse of the vitreous. In the large gaping wounds, my preference is a complete conjunctival flap, and not the suturing of the superficial layers of the cornea and sclera, in this way taking advantage of the elasticity of the conjunctiva. I should like to emphasize the importance of the administration of 1,500 units of antitetanic serum in all perforating wounds

of the eye. However, the patient should be thoroughly questioned, and caution exercised in its administration, so as to avoid the infrequent anaphylactic shock.

In considering the great frequency with which sodium salicylate orally nauseates individuals, we have elected to administer it intravenously, 15 grains twice a day, with exceptionally good results, and usually over a period of several weeks. It has been an aid, especially in the treatment of sympathetic ophthalmia.

THE TRAINING OF MEDICAL TECHNOLOGISTS IN TEXAS*

JOHN J. ANDUJAR, M. D.
FORT WORTH, TEXAS

During the early years of the twentieth century the accumulated work of a host of scientists gave birth to a new specialty, the diagnosis of disease and control of therapy by laboratory methods. The heightened medical tempo of the first World War gave impetus to this specialty, which was variously called clinical pathology, laboratory diagnosis, pathology or pathologic anatomy. Even to this day there seems to be no clear cut selection of one single name, but by common acceptation the title Clinical Pathology prevails. In this connection we note that one of our tax supported colleges, Texas State College for Women, gives an eight semester hour course[4] entitled, "Bacteriology and Clinical Pathology," and the writer has had the rather startling experience of having one of these sweet young graduates apply for a position as Clinical Pathologist (!) to his own hospital. Possibly short courses will soon be offered by our undergraduate colleges entitled, "Introduction to Neurosurgery" or "Elements of Operative Obstetrics."

In various medical schools the teaching of laboratory diagnosis to future physicians has been under the department of medicine, apparently on the strange premise that laboratory procedures have their chief value in internal medicine. The American Board of Pathology strives to please by bridging the gap with two separate diplomas entitled "Clinical Pathology" and "Pathologic Anatomy." Since the foremost national organization of laboratory diagnosticians calls itself the American Society of Clinical Pathologists, I shall for the purposes of this article refer to these specialists as Clinical Pathologists.

Immediately following the first World War the large majority of hospitals established small laboratories which were aptly described by Bodansky[2] as evil-smelling rooms in dark basements or behind the back stairs. To aid the new clinical pathologists in performing simpler procedures, young high school graduates were employed at nominal wages. These few helpers gradually grew into a host of "cook book workers, calling themselves laboratory technicians, and in all too many cases irresponsibly attempted procedures entirely beyond the scope of their feeble abilities. The early twenties often saw new lows in the respect exhibited by the average practitioner for the science of laboratory diagnosis. The bewildered physician realized that he was not always qualified to interpret even reliable laboratory findings, and to add to his difficulties, he often suspected correctly that the laboratory's reports were not trustworthy and accurate.

In an attempt to bring order out of this chaos, the American Society of Clinical Pathologists in 1928 established a national Board of Registry of Medical Technologists. The work of this Registry was to a great extent not fully appreciated, but through the years its efficiency and unswerving steadfastness of purpose have gained for it nationwide recognition, both from the medical profession and the various medical and hospital standardizing agencies. Gradually the standards of laboratory technologists were raised so that students had to pursue two years of college work with credits in biology, bacteriology, physics and chemistry. Because of the occasional opprobrium attached to the term laboratory technician, the designation medical technologist was selected as more suitable for this profession. Interested pathologists were encouraged to establish organized schools and under the auspices of the Registry the preceptor or apprentice style of training gradually waned. In December, 1939, definite action was taken to limit registration after 1943 only to graduates of approved schools. After that time the Registry will no longer accept for certification students whose training consisted of apprenticeship to a recognized pathologist. It is a real tribute to the fair-mindedness and high ideals of pathologists themselves that this marked advance was made possible. In the final analysis it was as inevitable as the abandonment of preceptor training by our medical forefathers and its substitution by well organized schools of medicine.

In this monograph, therefore, the term medical technologist is used to signify the trained and registered laboratory assistant to the clinical pathologist. Admittedly, the term is not sufficiently specific, as shown by a recent call from the Army, Navy, and Red Cross for medical technologists, including such diverse occupations as dental mechanics, dietitians, nurses, and even meat and dairy inspectors.[1] Many of the unapproved and

*From the School of Medical Technology, Texas Christian University, Harris Memorial Methodist Hospital, Fort Worth, Texas.
*Read before the Section on Clinical Pathology, State Medical Association of Texas, Dallas, May 15, 1940.

commercial schools have pounced upon the sonorous phrase medical technologist, and their graduates have formed numerous bands under the high-sounding titles of "National Society of Medical Technologists," "American Medical Technologists," and similar designations.

The need for adequate training of technologists is even more important than similar training and certification for nurses. In the technologist's findings often lies a clear cut diagnosis, or evidence for or against operation, or for initiation or discontinuation of treatments. Despite this life and death importance, some clinics and hospitals still employ so-called practical, or unregistered technologists. These self-same institutions would probably not even consider stooping to employ so-called practical, or unregistered nurses.

While it is perfectly true that either registered or unregistered technologists, or for that matter, general practitioners, could give some sort of instruction in laboratory procedures, it is equally certain that no ethical registered technologist or general practitioner would attempt to do this. With the group of unregistered, unethical, cook book laboratorians this paper has no concern. It is obvious, therefore, that the only group actually qualified to train technologists for registration would be the pathologists themselves. In obtaining the information for this survey, therefore, queries were limited to the forty-four Texas physicians, either members of the Texas Society of Pathologists, diplomates of the American Board of Pathology, or Fellows of the American Society of Clinical Pathologists. It is through their kindness and courteous coöperation that this paper has been made possible. Some additional material was secured from the Registry and also from personal observation made on visits to six of the seven approved schools in Texas during the year 1939.

In surveying this subject one is at once impressed by the recent marked improvement in the training of technologists. In 1932 there was not one single approved school in Texas. Seven years later, in 1939, no less than seven approved schools were in existence. Two (Baylor University Hospital and John Sealy Hospital) were under university-hospital auspices and one (Texas Christian University-Harris Memorial Methodist Hospital) was directly under university control, offering an integrated four year course leading to the degree of Bachelor of Science in Medical Technology. Seven years ago there were only eighty-three registered technologists in Texas, whereas in 1939, we find 360 registered technologists available. Since Texas has 301 registered hospitals and sanatoria with eighteen approved for intern training (of which in turn only three are approved for residency in specialty) we can safely assume that these institutions would require about 370 technologists, based on average requirements. Actually, this is only a very partial picture, since an equal number of workers would undoubtedly be required in public health laboratories, clinics, and offices. Possibly between 600 and 800 technologists could be absorbed in the entire State, a figure in sharp contrast with the 360 available. It should also be kept in mind that the turnover of technologists is high. Many of these charming young women will marry and leave the profession. Others are undoubtedly inclined to travel and will drift about the nation.

Of forty-four questionnaires mailed to the pathologists of the State, forty-three replies, or 97.7 per cent, were received. Approximately three-fifths, or twenty-eight pathologists, do not train technologists at any time. Of the remaining sixteen, we find that approximately half, or seven, conduct approved schools and the remaining half, or nine, conduct courses not approved by the American Medical Association or the Registry of the American Society of Clinical pathologists. Of these nine, nearly all stated that they simply train technologists "for their own use" and only two of these nine had any graduates in 1939. For the sake of brevity, these non-approved courses will be referred to as schools, even though their pathologist-directors would not necessarily consider them in this light. The seven approved schools have a maximum capacity of forty-one students and graduated thirty-two in 1939. The non-approved group has a maximum capacity of twenty-one but graduated only fourteen in 1939, and twelve of these fourteen graduated from one single school in Houston. The director of this school stated that it would probably become an approved school in the near future, which would undoubtedly be a progressive step, since it graduated one more student (twelve) than any other school in the State. It is plain, therefore, that with one single exception, only two technologists graduated from non-approved schools conducted by pathologists in the State of Texas in 1939.

A markedly uneven geographic distribution of approved schools is noted. Houston, for example, with two universities, several good hospitals, and a number of excellently qualified pathologists, has no school. El Paso has no approved school, but on the other hand, the smaller city of Galveston has two schools. The physical plants of six of these

seven schools appear reasonably adequate, and the single exception was awaiting an imminent change to new quarters. The physical facilities of the non-approved group can not be reviewed, since only three of the nine were visited.

Six schools, three in each group, accept male students, and ten do not. The ratio of registered medical technologists to students varied from a low of 1:3 to a high of 8:1. The Registry requires a ratio of one faculty member to each student, but the term faculty, of course, includes all qualified technologists and pathologists. Only one school, Baylor University Hospital, follows any definite publicity policy at the present time. It sends a copy of its bulletin, with a dignified, ethical letter describing the advantages of the profession, to the colleges of Texas. Only three schools, all approved, issue any descriptive literature on request.

One school admits high school graduates. It is naturally in the non-approved group, since both the Registry and the American Medical Association require at least two years of college. Until last year the American Medical Association allowed approved schools to accept registered nurses as students. This unfortunate ruling was not in keeping with the Registry's far higher requirements and has been entirely abrogated. Five schools, three non-approved and two approved, require a college degree for admission, thus lengthening the entire time to a five-year period before certification. Naturally the usual required credits in chemistry, physics, bacteriology, and biology are demanded in this college training.

As regards the actual courses offered, one meets with the widest diversity. Their duration is almost uniformly twelve months, there being 83 per cent of the courses in this group, as compared with the national figure[5] of 60 per cent quoted by Ikeda in his 1934 survey.[3] As regards lecture hours, curriculum, practical and oral examinations, and records of grades, one notes considerable variation from school to school. One of the approved group requires one hour daily of scheduled lectures and five hours of scheduled and supervised laboratory instruction, covering the equivalent of thirty-six semester hours of college work. Many schools frankly stated that they gave no formal instruction and depended entirely on so-called preceptor or apprenticeship or internship technique. The application of these aforementioned techniques presupposes that the student has had nearly adequate instruction in the didactic aspect of medical technology, which unfortunately seldom is the case, since this instruction is available almost exclusively in hospitals. All seven approved and eight of the non-approved schools teach the Wassermann and flocculation procedures. All schools in both groups teach some type of histo-pathologic technique. Few schools follow the model curriculum of the Registry with any regularity. It is surprising to note that five schools (two non-approved and three approved) permit students to perform and report unsupervised laboratory procedures under some circumstances.

None of the non-approved and five of the seven approved schools award a certificate or diploma at the conclusion of the course. A sixth approved school grants the degree of Bachelor of Science in Medical Technology at the conclusion of the coördinated university and hospital four year course. Only one of the sixteen schools does not urge its graduates to work under the immediate supervision of a pathologist following graduation. Most of those questioned replied affirmatively and added strong comments on this point. Under the Registry's strict code of ethics, of course, all registered technologists are permitted to work under the supervision of a pathologist, or for that matter of a qualified, ethical physician who does not accept laboratory work beyond the limits of his own practice. All seven approved and six of the non-approved schools, urge their graduates to seek the certificate of the Registry. The code of ethics forbids registered technologists to operate independent laboratories or advise laymen regarding diagnosis or treatment of disease. After 1934, as stated, it will not be possible for graduates of non-approved schools to gain admission to the qualifying oral and written examinations of the Registry.

Some have questioned the necessity of a national group specifying standards and certifying graduates. Possibly it would appear satisfactory to allow students to receive their training haphazardly, later passing "strict" state examinations. This is actually being advocated by a vociferous minority of those anxious either to sidestep high requirements or to increase governmental control over medicine. We feel strongly constrained to oppose any such action. It tends to invite political chicanery and to lower standards. In one state, for example, it is now possible to pass the licensure examinations in only one branch of technology, such as chemistry or bacteriology, and yet receive a full license as a medical technologist. Superficially one might suspect the clinical pathologists fear being forced into direct competition with technologists and therefore oppose licensure. As a matter of fact, however, the simplest considerations of common sense show that

the patient's well being should not be jeopardized by allowing workers in ancillary fields to engage in a wide variety of medical activities without competent medical supervision. Kracke's observation[6] that "fewer of the desirable young medical men are going into clinical pathology as a life work" is significant. If surgeons were forced to compete with their former surgical nurses, fewer desirable young physicians would be going into surgery. Fortunately, state licensure of technologists has received little support due to two facts: the efficient operation of the national Registry has rendered state licensure entirely unnecessary to appraise qualifications of technologists, and, secondly, the clamor for state licensure has arisen from those who could not themselves meet high Registry standards.

DISCUSSION

The problem of training medical technologists is a vital one of direct concern to every person interested in the welfare of our sick people. To the occasional unfortunate pathologist not able to employ independently his own technologists, registration provides the sheet anchor of minimum qualifications. The long forward strides of the past decade are certain to be continued in the coming years. The privately operated preceptor or apprentice type of school appears to be definitely giving way to the more desirable organized independent hospital school, and this in turn appears to be slowly seeking the stimulus and discipline of definite university control and integration with preliminary studies.

Admittedly, the Registry of Medical Technologists has not been perfect. The uniform lack of adherence to their model curriculum is more an index of the shortcomings of this work than of the rugged individualism of the Texas pathologists. Many of our colleagues have felt that enforcement of the Code of Ethics has left much to be desired. In the last analysis, however, under the welcome mat of this organization lie all the keys necessary to continue to unlock the doors barring the high road to better education of technologists.

CONCLUSIONS

In conclusion it is evident that: (1) There exists a very real demand for registered technologists in Texas. (2) Because of the few graduates each year, this demand may possibly far exceed the supply. (3) This scarcity has forced many institutions to employ technologists from distant regions. (4) The training of technologists in non-approved schools operated by qualified pathologists is minimal. (5) The action of the Registry in refusing recognition to non-approved school graduates after January 1, 1943, will not affect four-fifths of the Texas pathologists and apparently will not seriously handicap the remaining group. (6) The quality of training obtainable in the approved schools of medical technology of Texas compares favorably with that of the nation as a whole.

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5. Ikeda, Kano: Survey of Training Courses for Laboratory Technicians in General Hospitals, Am. J. Clin. Path. 5:64 (Jan.) 1935.
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1300 W. Cannon.

ABSTRACT OF DISCUSSION

Dr. Roy R. Kracke, Atlanta, Ga.: The training of laboratory technicians is undergoing a slow and gradual improvement. As is the case in all movements of this type, occasional instances are bound to arise in which certain injustices may be perpetrated and in which irregularities occur until training methods have become firmly established on a nation wide scale. I am personally convinced that eventually this type of training of medical workers will be taken over entirely by the universities of the United States. Many universities are already engaged in this work. I believe it is practically impossible for a practicing pathologist to offer a thorough and satisfactory course of training for a medical technologist. I base this on the experience gained through years of teaching that it is desirable, first, to have class room and didactic instruction before practical work is attempted. This is impossible for the ordinary practicing pathologist to offer in connection with his manifold duties during the course of the day.

I am strongly opposed to any attempt for State licensure for medical technologists. As a matter of fact, with the national accrediting of medical technologists by the American Society of Clinical Pathologists in this particular branch, we have the only group of medical workers that are certified on a national scale. We are all familiar with the abuses and political angles that enter into the setting up of State examining and licensing boards and if possible we would like to avoid this in the field of medical technology. I disagree, therefore, with some of the sentiments that have been expressed here that it is better to encourage State licensure and attempt to direct it. On the other hand I would be strongly opposed to it in any form whatever.

Dr. M. Bodansky, Galveston: Dr. Andujar has presented a very complicated subject in a most comprehensive and lucid manner. The training of medical technologists presents many problems. First is the question of the relative importance of didactic and practical training. In my experience the value of scheduled lectures and laboratory exercises is secondary to practical experience. Where the number of students under training is kept at a minimum, at a ratio of one student to one paid member of the laboratory staff, or even where the ratio is somewhat higher, the student gains more by becoming, gradually, an integral part of the laboratory organization. To the extent that a student has real ability and is reliable, to that extent is it desirable to give her more and more responsibilities. As a result of such

training, supplemented by informal, individualized discussion, principally at the work-table, and a liberal amount of supplementary reading (I require all of my students to read through a half dozen books, including, for example, Kracke's "Hematology"), the student at the end of the course of training finds little difficulty in digging out information from references and in adjusting herself to the practices in other laboratories. I feel that the student should not be taught too far above the level of her ability. To crowd an average individual with more facts than she is able to digest may be dangerous, because more knowledge is assumed than actually exists. We may anticipate further progress in the standardization of the training of medical technologists and the integration of such training with a university curriculum. Such a program will require special subsidies. In all of these plans we have to keep in mind the interest of the student. The only way a student can become really proficient is to afford him or her a maximum opportunity for practical work. How can we strike a happy medium so that the student is at the same time doing useful work for himself or herself and the laboratory, and yet is not a victim of exploitation? Finally, it must be recognized that the salary level of medical technologists at the present time is in general not commensurate with their training. Unless the problem of the economic security of the medical technologist is given careful consideration, it will be difficult to stem the tendency of some to "kick over the traces" and enter into active competition with the accredited clinical pathologist.

Dr. Andujar (closing): The suggestions of my colleagues on this timely subject are very much appreciated. Particularly appropriate is Dr. Todd's remark that the tiny rivulet trickling down hill will soon become an uncontrollable torrent if we do not take definite and positive action. As stated in my paper, I very heartily agree with Dr. Kracke's strong opposition to State licensure. It is difficult to understand how a politically controlled body would know exactly where a medical technologist's duties stop and a clinical pathologist's begin. Especially is this true when a few members of our own profession are not entirely clear on the subject. It is less difficult to foresee the standards probably required by politicians for registration of medical technologists.

I would like to emphasize Dr. Bodansky's plea against exploitation of the student technologist. Some commercial schools (none of which are on the approved list of either the A. M. A. or the A. S. C. P.) place their recent graduates in certain hospitals as unpaid workers, using the sonorous title of "intern technicians."

It is to be hoped that eventually medical technology will indeed become a university course, giving complete and adequate didactic instruction in the four-year period. Following this training the year of hospital experience could very appropriately be entirely limited to practical work without the present disadvantages of the purely apprentice system of training.

OLD TUBERCULOUS PATIENTS FOCI

Treatment of older patients suffering from tuberculosis is one of our major problems in the eradication of the disease. A third of the patients in sanatoria are over forty years of age. Temporary forms of collapse treatment in older patients are less apt to be successful than the permanent form provided by thoracoplasty. One hundred sixty-two patients between the ages of 40 and 65 treated by thoracoplasty showed improvement of 84 per cent, with 35 per cent returning to work.—Richard H. Overhold, M. D., Am. Rev. Tuberc. (Feb.) 1940.

SPASM OF INFERIOR OBLIQUE WITH HEAD TILT*

MALCOLM K. McCULLOUGH, M. D.
DALLAS, TEXAS

True spasm, quoting Posey and Spiller, is that form of muscular overaction produced by excessive stimulation, and may be primary or secondary, the former being the less common of the two. In the literature there is very little about primary spasm of individual ocular muscles, and there are no reported cases of primary spasm of the inferior oblique. None of the standard textbooks discuss it to any extent, and some make no mention of the condition, it apparently not being recognized as a clinical entity. The probable explanation for this fact is that a majority of writers consider all forms of spasm of ocular muscles to be secondary to a paresis or paralysis of the synergic or associate muscle. Many forms of the latter have been reported, and Alexander Duane has tabulated the proper surgical treatment for the correction of the various forms of hyperphoria due to individual muscular paralysis.

In considering the subject it might be well to review the anatomy of the inferior oblique, as given by Whitnall. It is the only one of the extraocular muscles which does not arise from the apex of the orbit, its origin being from a shallow depression on the floor of the orbit just within the orbital margin and adjacent to the opening of the nasolacrimal canal. Some fibres frequently arise from the lower part of the fascia covering the lacrimal fossa and are therefore closely related to the lower part of the lacrimal sac. The muscle passes laterally and backward as a flat band beneath the inferior rectus to which it is closely connected by fusion of their fascial sheaths. It is separated from the floor of the orbit by a compact mass of fat and is inserted into the posterior segment of the globe. Its course intersects the axis of the orbit at an angle of 75 degrees. It is fleshy in nearly its whole extent, the tendinous portion being only 2.6 mm. long or often nonexistent, so that frequently muscle fibres pierce the sclera. The line of insertion lies obliquely in the lateral and inferior quadrant of the posterior segment of the globe, farther back than that of the superior oblique with which it is not parallel but makes an angle of 25 degrees, and nearer the optic nerve from which, according to Fuchs, it is distant 5.2 mm. in normal eyes and 7.1 mm. in myopic globes. It lies 9.5 mm. away from the insertion of the external rectus and almost on the same meridian, though at right

*Read before the Section on Eye, Ear, Nose and Throat, State Medical Association of Texas, Dallas, May 14, 1940.

angles to the line of the latter and is only 2.2 mm. from a point corresponding to the fovea centralis. The distance from the corneal margin, according to Fuchs, varies from 17 to 19 mm. The nerve supply is from the inferior division of the third nerve.

The action of the muscle is that of an elevator-abductor and external rotater. Its yoke muscle is the superior rectus.

Etiology of Spasm.—To repeat, the probable lack of recognition of primary spasm as a clinical entity is no doubt due to the fact that nearly all observers have followed Duane's teaching, in which he says that practically all forms of hyperphoria are paretic in origin, even though it may be almost impossible to locate the paretic muscle; his contention being that hyperphoria that exists for a certain period will remain a fairly constant factor, even though the paretic muscle regains it tonus. On the other hand, Posey and Spiller state that primary spasm of an ocular muscle, though extremely rare, may be due to meningitis or other irritative brain lesions, with resultant overstimulation of the affected muscle. More plausible is the theory that permanent overaction is more or less mechanical, being due either to an insertional abnormality or an excessive development of the muscle, as well as an increase in the flow of nervous stimuli passing to the muscle, the overaction continuing even after the associate has regained its tonus.

Fig. 1. (Left) Photograph of patient at about the age of 5, showing head tilt. (Right) Photograph of patient at the age of 7, one year following operation.

Diagnosis.—The condition is manifested by a deviation of the globe, which becomes more marked when the eye is carried nasally, which is the field of greatest action of the muscle. The most striking characteristic of patients with spasm of the inferior oblique is the manner in which the head is carried, to one side or the other, the head tilt being a protective process to obviate the diplopia which results from the overaction of the muscle. This peculiarity of tilting the head is, of course, not found alone in the condition here discussed, but is also encountered in any involvement of an elevator, just as rotation of the head is found in involvement of an abductor. The head is carried to the right shoulder or the left, depending on whether the right image or left is higher, so that in right hyperphoria the head is carried to the left, because the left image is the higher of the two, and in tilting the head to the left the right image is elevated and the two images brought into closer proximity.

In making a diagnosis of what seems at first glance to be primary spasm, great care should be taken to rule out the more commonly found entity of paresis of the superior rectus with secondary spasm of its opposite inferior oblique. In making this differentiation two important findings make the diagnosis easier: (1) In spasm the excursion of the eye is faster in the field of action of the muscle, while in paresis the excursion is lessened. (2) Fixation is spasm is done by the slower moving eye, while in paresis fixation is usually performed by the faster moving eye.

Nearly all of these patients have at one time or other been examined, either by an orthopedist or a general surgeon, for correction of the head tilt and coincident torticollis. Especially is this true of the cases of long standing, for in them we find postural changes which, if not corrected in early youth, persist through life, either in the form of an elevated shoulder, a lateral curvature of the spine, or both. That these changes can be permanent was forcibly impressed

on me several years ago by a patient who had had a head tilt since infancy. Dr. Alexander Duane had seen her during childhood and advised a tenotomy of the inferior oblique, but his advice was not heeded and at the age of 19 there was a marked elevation of one shoulder and permanent postural changes.

Treatment. — For the correction of this condition only one form of treatment lends itself with any surety of success, and that is tenotomy of the spasmodic muscle. The approach to the muscle is threefold: (1) through the skin and orbital fascia to the point of origin on the floor of the orbit; (2) through conjunctiva to the site of origin; and (3) through conjunctiva to the point of attachment on the posterior surface of the globe, as described by Dunnington. The first method leads to a slight scarring of the lower lid, an objectionable feature, especially in young girls, and so is not thought to be applicable. The third involves a disturbance of the external rectus and is more practical when done in conjunction with lengthening or shortening of the external rectus. The operation of choice, when the inferior oblique alone is involved, is tenotomy at the origin through a conjunctival incision and this is carried out as follows: An incision is made through the conjunctiva of the lower cul-de-sac and carried down to the floor of the orbit just lateral to the lacrimal fossa. As soon as bone is encountered a squint hook is passed from without in, hugging the floor of the orbit, and the muscle brought into the wound. It is then grasped with forceps and a section of the muscle, 3 to 4 mm., excised after which the wound is closed. That this does not lead to a complete paralysis of the inferior oblique can be demonstrated by the motility of the eye up and in after the lapse of a few days and is probably due to its intimate association with the inferior rectus.

CASE REPORT

D. L. C., a girl, age 6, was first seen several years ago. The general medical history was essentially negative, she being the third child of fairly young and apparently healthy parents in whom there was no congenital defect and no history of eye trouble. The other two children were normal. The patient had been a normally delivered child with labor of normal duration. Aside from the usual diseases of childhood and occasional attacks of mild pyelitis, there was no notable illness. The mother stated that as soon as the child was able to sit up various people had noticed that the head was always carried toward the left side, but that little or no attention was paid to the fact because it was thought to add to the attractiveness of the child. Due to the fact that the condition persisted, at about the age of 5, a general surgeon was consulted in an effort to correct the deformity. His findings were essentially negative, since no overaction of the sternomastoid existed, and the matter was dropped for some time. Several months later the child began complaining of headaches and the parents became aware of postural changes. A pediatrician was consulted and the case was referred for examination of the eyes.

Examination showed a marked head tilt to the left with elevation of the left shoulder and a definite lateral curvature of the spine. The child had normal vision of each eye, and under atropine, 20/20 with a plus 1.00 sphere combined with a plus 0.50 cylinder axis 90 in each eye. When the head was held in an upright position the child promptly complained of diplopia. On routine examination of the muscles there was found two prism diopters of esophoria and 10 prism diopters of right hyperphoria in the primary position. When the eyes were carried to the left there was a definite upshoot of the right eye and the upward deviation was increased to 15 prism diopters. In view of the spastic condition of the right inferior oblique, it was thought that there would surely be a coincident paresis of the left superior rectus but so far as could be told there was no limitation of motility in any direction of gaze in the left eye. Efforts on the tangent screen were not successful because of the age of the patient and so were of no help. The child was seen several times. While the hyperphoria varied slightly with each examination it was impossible to make out any involvement of the left superior rectus and a diagnosis of spasm of the right inferior oblique was made. A teno-myomectomy was advised and the operation performed on November 13, 1928, the procedure being carried out by the conjunctival route to point of origin. The convalescence was normal and as soon as the child was allowed without a dressing it was noticed that the head was carried much more erectly than formerly. She was examined at frequent intervals for about a year and a marked improvement was noticed in her carriage.

Examination on November 13, 1931, showed a right hyperphoria of 4 prism diopters and on the tangent screen there was no evidence of a paresis of the left superior rectus, nor was there any diplopia in the field up to the left, showing that the right inferior oblique was acting normally, this fact probably being due to the close association between the sheath of this muscle and that of the inferior rectus or to re-attachment. The head is held practically straight, with an occasional inclination to the left, which is not noticeable as the parents report that they are not aware of it. She has had some difficulty in doing her school work and so was given her cylindrical correction with a 1.5 prism diopters base down in the right eye. She was seen about a year ago and while there was still a slight right hyperphoria, no symptoms were noted, and posture was normal.

Medical Arts Building.

ABSTRACT OF DISCUSSION

Dr. Edgar H. Vaughn, Tyler: It is a sad sight to see a boy or girl with a head tilt. It gives them an inferiority complex as soon as they are old enough to be conscious of the fact. Many times their parents, teachers or playmates by scolding, pitying or "razzing" keep them constantly embarrassed, as they are ignorant of the cause.

I have seen very few cases and have attempted, by refraction, to give relief. The results were usually not perfect. Phorias have always given me trouble in refraction. The sooner a case can be diagnosed properly and operation is done, the better it is for the patient, because the lateral curvature of the spine may be permanently corrected by an early procedure.

I feel that Dr. McCullough's paper is well written and is as clear as a complicated thing of this kind can be made. I feel sure he has rewritten it two

or three times so as to condense it into its present shape.

I thoroughly agree with him that the approach through the conjunctiva to the site of the origin of the inferior oblique is the procedure of choice. I think the operation is easier done than it is to be sure of a correct diagnosis.

I wish to thank Dr. McCullough for being selected to discuss his interesting paper and trust it may be the cause of the correction of many of these unfortunate cases.

MISCELLANEOUS

COMING MEETINGS AND CLINICS

State Medical Association of Texas, Fort Worth, May 12-15, 1941. Dr. Preston Hunt, Texarkana, President; Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth, Secretary.

American Medical Association, Cleveland, June 2-6, 1941. Dr. Nathan B. Van Etten, New York, President; Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Southern Medical Association, Louisville, Kentucky, November 12-15, 1940. Dr. Arthur T. McCormack, Louisville, Kentucky, President; C. P. Loranz, Empire Building, Birmingham, Alabama, Secretary-Manager.

Texas Allergy Association, Fort Worth, May 12, 1941. Dr. Boen Swinny, Medical Arts Building, San Antonio, President; Dr. Homer Prince, Medical Arts Building, Houston, Secretary.

Texas Ophthalmological and Otolaryngological Society, Fort Worth, December 13 and 14, 1940. Dr. J. W. Ward, Greenville, President; Dr. Dan Brannin, Medical Arts Building, Dallas, Secretary.

Texas Radiological Society, Sherman, January 18, 1941. Dr. C. F. Crain, Corpus Christi, President; Dr. L. W. Baird, Temple, Secretary.

Texas Club of Internists, Houston, 1941. Dr. Carl Lovelace, Waco, President; Dr. George Herrmann, Medical College, Galveston, Secretary.

Texas Association of Obstetricians and Gynecologists, Galveston, 1941. Dr. H. Reid Robinson, Galveston, President; Dr. Julius McIver, 1314 Medical Arts Building, Dallas, Secretary.

Texas Pediatric Society, Fort Worth, May 14, 1941, Dr. C. P. Jasperson, Corpus Christi, President; Dr. Frank Lancaster, 4409 Fannin Street, Houston, Secretary.

Texas Neurological Society, Austin, Nov. 4, 1940. Dr. Wilmer Allison, Fort Worth, President; Dr. Melbourne J. Cooper, Nix Professional Building, San Antonio, Secretary.

Texas Railway and Traumatic Surgical Association, Fort Worth, May 12, 1941. Dr. G. V. Brindley, Temple, President; Dr. Ross Trigg, First National Bank Building, Fort Worth, Secretary.

Texas State Pathological Society, Dallas, Jan. 26, 1941. Dr. Geo. T. Caldwell, Dallas, President; Dr. M. D. Bell, 1109 Medical Arts Building, Dallas, Secretary.

Texas State Heart Association, Fort Worth, May 12, 1941. Dr. Joseph Kopecky, San Antonio, President; Dr. V. E. Schulze, San Angelo, Secretary.

Texas Dermatological Society, Fort Worth, May 12, 1941. Dr. W. A. Smith, Beaumont, President; Dr. Duncan O. Poth, 1230 Nix Professional Building, San Antonio, Secretary.

Texas Surgical Society, Temple, April 7 and 8, 1941. Dr. W. L. Crosthwait, Waco, President; Dr. Walter Stuck, 1426 Nix Professional Building, San Antonio, Secretary.

Texas Orthopedic Society, Fort Worth, May 12, 1941. Dr. W. B. Carrell, Dallas, President; Dr. Ruth Jackson, Medical Arts Building, Dallas, Secretary.

Texas Association of Medical Anesthetists, Fort Worth, May 12, 1941. Dr. Thomas H. Compere, Houston, President; Dr. R. A. Miller, 1415 Nix Professional Building, San Antonio, Secretary.

Texas Society of Gastro-enterologists and Proctologists, Fort Worth, May 12, 1941. Dr. M. O. Rouse, Dallas, President; Dr. Tom E. Smith, 1207 Medical Arts Building, Dallas, Secretary.

Texas Mental Hygiene Association, San Antonio, February, 1941. Dr. Paul White, Austin, President; Dr. Evelyn M. Carrington, Huntsville, Secretary.

Texas Tuberculosis Association, San Antonio, May 5-8, 1941. Dr. E. G. Faber, Tyler, President; J. W. Butler, Galveston, Secretary.

Texas Public Health Association. Dr. J. W. E. H. Beck, De Kalb, President; Mr. P. A. Kerby, State Department of Health, Austin, Secretary

Second District Medical Society, Abilene, Nov. 1 and 2. Dr. W. V. Ramsey, Abilene, President; Dr. W. T. Sadler, Merkel, Secretary.

Third, Panhandle, District Medical Society, Amarillo, April 8 and 9, 1941. Dr. F. A. White, Childress, President; Dr. H. H. Latson, 301 Polk St., Amarillo, Secretary.

Fourth District Medical Society, San Angelo, October, 1941. Dr. O. H. Chandler, Ballinger, President; Dr. F. T. McIntire, San Angelo, Secretary.

Fifth and Sixth, Southwest District Society, Laredo, 1941. Dr. T. E. Christian, San Antonio, President; Dr. W. W. Bondurant, Jr., 1512 Nix Professional Building, San Antonio, Secretary.

Seventh, Austin District. Dr. Joe A. Shepperd, Burnet, President; Dr. A. L. Nanny, Marble Falls, Secretary.

Eighth, Ninth and Tenth District Medical Society, Houston, 1940. Dr. Walter D. Brown, Beaumont, President; Dr. A. A. Ledbetter, Medical Arts Building, Houston, Secretary.

Eleventh District Society, Tyler, 1941. Dr. Clayton Shirley, Tyler, President; Dr. C. C. McDonald, Tyler, Secretary.

Twelfth, Central Texas District Society, Waco, Jan. 14, 1941. Dr. Dan Warren, Waco, President; Dr. R. K. Harlan, Temple, Secretary.

Thirteenth, Northwestern District Society, Bowie, March 11, 1941. Dr. J. Edward Johnson, Mineral Wells, President; Dr. Charles H. McCollum, Jr., 210 Mid-Continent Building, Fort Worth, Secretary.

Fourteenth District Society, Greenville, Dec. 4, 1940. Dr. Ira L. Thomas, Gainesville, President; Dr. R. S. Usry, 1835 Garrett, Dallas, Secretary.

Fifteenth, Northeast District Society, Longview, October 14, 1941. Dr. Hugh M. Ragland, Gilmer, President; Dr. J. N. White, Texarkana, Secretary.

CLINICS

Post Graduate Medical Assembly of South Texas, Houston, December 3, 4, and 5, 1940. Dr. J. E. Clarke, Medical Arts Building, Houston, President; Dr. Cornelius Pugsley, 1801 Second National Bank Building, Houston, Secretary.

Dallas Southern Clinical Society Conference, Dallas, March 17-20, 1941. Dr. Everett C. Fox, Medical Arts Bldg., Dallas, President; Dr. C. H. Warren, 1133 Medical Arts Bldg., Dallas, Secretary.

International Post-Graduate Medical Assembly of Southwest Texas, San Antonio, January 28, 29, and 30, 1941. Dr. J. Layton Cochran, 1126 Medical Arts Building, San Antonio, President; Dr. Charles L. McGehee, 723 Medical Arts Building, San Antonio, Secretary.

BACTERIAL VACCINE AND THE COMMON COLD

A carefully controlled study of the heat-killed bacterial vaccine for the common cold revealed no evidence that it was of value in a group of cold-susceptible students in the University of Minnesota, H. D. Diehl, M. D., A. B. Baker, M. D., and D. W. Cowan, M. D., Minneapolis, report in *The Journal of the American Medical Association* for August 24.

Their study was based on two groups of cold-susceptible students. The control group, the members of which believed that they were receiving vaccine, were given hypodermic injections (beneath the skin) of sterile salt solution at the same intervals that the experimental group received the vaccine.

"During the year of the study," the three physicians report, "the persons who received the vaccine reported an average of 2.1 colds per person. This is a reduction of 55 per cent from the average of 4.7 colds which these same students reported that they had had during the year prior to the study. This is as great a reduction as has been reported in most of the studies which conclude that these vaccines are of value.

"However, our control group, who received only the salt solution, reported an average of only 1.9 colds during the year of the study, a reduction of 61 per cent from the average of 4.9 colds which was reported for the previous year.

"From these figures it is apparent that there is no evidence in this study that the vaccine had any influence on the average number of colds suffered per person."

These conclusions are parallel to those reported by these same physicians in 1938 from a study which was similar but in which the organisms in the vaccine were destroyed mechanically instead of by heat. This last study was undertaken after it had been contended the previous study should have included the heat-killed bacterial vaccine.

SULFANILAMIDE FOR MENINGITIS

Sulfanilamide is a simple and highly effective treatment for cerebrospinal meningitis (inflammation of the membranes enveloping the spinal cord and brain), Kalei K. Gregory, M. D., Edward J. West, M. D., and Raymond E. Stevens, M. D., Providence, R. I., state in *The Journal of the American Medical Association* for Sept. 28. They report a death rate of only 17.2 per cent in patients so treated

as compared with 45.1 per cent in patients given antimeningococcus serum and 42.4 per cent in patients treated with meningococcus antitoxin.

DOCTORS NEEDED FOR MEDICAL POSITIONS

The Civil Service Commission announces that enough applications have been received to meet the prospective need for temporary and part-time civilian medical officers in connection with the Army expansion. Receipt of applications closed October 14.

The Commission calls attention to the fact, however, that there is an urgent need for medical officers and senior and associate medical officers to fill permanent positions in other agencies. Applications will be received until further notice. The positions pay from $3,200 to $4,600 a year. Fourteen specialized branches of medicine are included.

There is also an urgent need to fill junior medical officer positions at $2,000 a year at St. Elizabeths Hospital, Washington, D. C.

Full information and application forms for these examinations may be obtained at the office of the Secretary, Board of U. S. Civil Service Examiners at any first- or second-class post office, or from the U. S. Civil Service Commission, Washington, D. C., or from any of the Commission's district offices.

ARMY MEDICAL LIBRARY DESIRES REPRINTS

The Army Medical Library, Washington, D. C., will welcome reprints of medical articles from physicians. These reprints are placed in a special collection catalogued by author and will thus form a ready bibliography of the work of any given writer and a valuable supplementary source of material when the volume of original publication is temporarily unavailable at the bindery or on loan. Texas physicians are urged to place the Army Medical Library on their mailing lists for reprints and to furnish this library any reprints that they may now have of articles published in the past. The Army Medical Library will send franked labels for use in mailing such reprints, if request is made for that purpose.

LIBRARY NOTES

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Requests for packages should be addressed "Library, State Medical Association of Texas, 1404 W. El Paso Street, Fort Worth, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Only one package may be borrowed at a time, and packages are allowed to remain in the hands of the borrower for 14 days.

Package Service

Packages were mailed out to the following from the Library of the State Medical Association during October:

Dr. J. B. Howell, Dallas—*Lips, Mouth and Neck, cancer* (34 articles).

Dr. J. R. Nicholson, San Antonio—(1 book).

Mrs. Lloyd Laird, Pampa—*Medicine, socialized* (10 articles).

Dr. J. J. Muirhead, Vernon—*Chemotherapy* (13 articles).

Dr. Stewart Cooper, Abilene—(4 journals).

Mrs. J. R. Wagner, Palacios—*Cancer* (9 articles).

Dr. J. P. McAnulty, San Angelo—*Menopause, disorders* (2 articles).

Dr. J. M. Nichols, Coleman—*Syphilis, congenital* (20 articles).

Dr. A. W. Multhauf, El Paso—*Impregnation* (8 articles).

Dr. B. A. Kirkpatrick, Taylor—(1 book).

Dr. W. D. Blassingame, Denison—*Fascia* (3 journals).

Dr. C. D. Reece, Houston—*Typhus* (1 article).

Dr. George T. O'Byrne, Corpus Christi—*Histamine, therapy* (11 articles).

Dr. J. M. Johnson, Longview—*Appendicitis* (40 articles).

Dr. D. Lyle Robertson, Wichita Falls—*Syphilis, therapy* (7 articles).

Dr. W. L. Bush, San Angelo—*Abortion, criminal* (1 article).

Dr. G. E. Glover, Austwell—*Omentum, torsion* (11 articles).

Dr. H. H. Niehuss, Gladewater—*Pregnancy, vomiting in* (6 articles).

Dr. G. V. Pazdral, Somerville—*Seasickness* (6 articles).

Dr. Heinrich Lamm, La Feria—(1 book).

Dr. E. H. Caldwell, Tyler—*Suprarenals, tumors* (17 articles).

Dr. Geo. M. Waddill, Amarillo—*Brain, roentgenography* (30 articles).

Dr. Bernard B. Friedman, Corpus Christi—(6 journals).

Dr. O. J. Moore, Longview—*Gonorrhea, in infants and children* (20 articles).

Dr. Joe A. Shepperd, Burnet—*Purpura, hemorrhagica* (13 articles).

Dr. Earl Gaston, Falfurrias—*Sterility, etiology* (9 articles).

Dr. T. D. Young, Roscoe—*Nails, mycosis* (18 articles).

Mrs. T. S. Edwards, Knox City—*Diet and Dietetics* (18 articles).

Dr. L. O. Dutton, El Paso—*Vitamins* (9 articles).

Dr. Otto Lippmann, Austin—(1 journal).

Dr. Donald H. McDonald, Abilene—*Physicians, women* (6 articles).

Dr. H. H. Cartwright, Breckenridge—*Neurosyphilis, therapy* (19 articles).

Dr. C. B. Young, Tyler—*Parathyroid, diseases* (22 articles).

Dr. J. P. Powell, Dalhart—*Vertigo, aural* (17 articles).

Dr. W. P. Morgan, Austin—*Typhus* (23 articles).

Dr. H. R. Dudgeon, Jr., Waco—*Femur, fractures* (21 articles); *Vas Deferens, surgery* (5 articles).

Dr. R. R. Wills, Hereford—*Ulcers, therapy* (Zinc Peroxide) (7 articles).

Mrs. E. W. Moss, Wellington—*Communicable Diseases, prevention* (9 articles).

Dr. H. T. Aynesworth, Waco—*Eyes, diseases* (3 articles).

Accessions

W. B. Saunders Company, Philadelphia—Pelouze: Office Urology.

C. V. Mosby Company, St. Louis—Meakins: Practice of Medicine, third edition; Schaub and Foley: Methods for Diagnostic Bacteriology; Davison: Synopsis of Materia Medica, Toxicology and Pharmacology.

Year Book Publishing Company, Chicago—Gordon & Sevringhaus: Vitamin Therapy in General Practice; Greenhill: Obstetrics in General Practice; Geiger: Year Book of Public Health.

Macmillan Company, New York—Holmes: Bacillary and Rickettsial Infections.

Williams and Wilkins, Baltimore—Lowsley and Kirwin: Clinical Urology, 2 volumes.

Individual Donations

For the Museum: Bandage issued by the military authorities during the Spanish-American War to Spanish troops, instead of a medical kit; donated by Dr. C. R. Lees, Fort Worth, Texas.

Reprints, donated by Drs. L. O. Godley and S. J. R. Murchison, Fort Worth, Texas.

A book, Medical Treatment of Cataract, second edition, donated by Dr. R. H. Needham, Fort Worth, Texas.

SUMMARY

Reprints received, 1501. Local users, 30.
Journals received, 150. Borrowers by mail, 39.
Items consulted, 80. Packages mailed out, 40.
Items taken out, 126. Items mailed out, 462.
Total items consulted and loaned, 668.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES

The following products have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Antipneumococcic Serum, Type I (from Rabbits). "Obtained from the blood of an animal . . . of the genus Lepus, which has been immunized with cultures of a pneumococcus (Diplococcus pneumoniae) of one of the varieties known as type I . . ." U. S. P. For standards see the U. S. Pharmacopeia XI, 1939, Second Supplement, under Serum Antipneumococcicum.

Antipenumococcic Rabbit Serum, Therapeutic, Type I—Gilliland.—Prepared by immunizing rabbits with intravenous injections of virulent cultures of type I pneumococcus. The product is refined and concentrated by a method perfected in the firm's laboratories. The usual sterility and safety tests are carried out in accordance with the requirements of the National Institute of Health. The potency of the product is expressed in terms of the unit as described by Felton. The serum is marketed in ampule packages, each containing 20,000 units or 50,000 units of type I pneumococcus antibody. The Gilliland Laboratories, Inc., Marietta, Pa.

Antipneumococcic Serum Rabbit Serum, Type I, Concentrated.—Prepared from the blood of rabbits which have been immunized by repeated injections of type I pneumococci, according to the procedure suggested by Horsfall, Goodner, MacLeod and Harris (*J. A. M. A.* 108:1483, May 1, 1937). The final product contains merthiolate 1 in 10,000 and 0.2 per cent of phenol. Marketed in packages of one vial containing 20,000 units and one vial containing 5 cc. of the same serum diluted (1:100) for the sensitivity test. E. R. Squibb & Sons, New York.

Antipneumococcic Serum, Type II (from Rabbits).—"Obtained from the blood of an animal . . . of the genus Lepus, which has been immunized with cultures of a pneumococcus (Diplococcus pneumoniae) of one of the varieties known as . . . type II . . ." U. S. P. For standards see the U. S. Pharmacopeia XI, 1939, Second Supplement, under Serum Antipneumococcicum.

Antipneumococcic Rabbit Serum, Therapeutic, Type II.—Prepared by immunizing rabbits with intravenous injections of virulent cultures of type II pneumococcus. The product is refined and concentrated by a method perfected in the firm's laboratories. The usual sterility and safety tests are carried out in accordance with the requirements of the National Institute of Health. The potency of the product is expressed in terms of the unit as described by Felton, the unit being one-one hundred and fiftieth cc. of the control serum distributed by the National Institute of Health. The serum is marketed in ampule packages, each containing 20,000 units or 50,000 units of type II pneumococcus antibody. The Gilliland Laboratories, Inc., Marietta, Pa.

Antipneumococcic Serum, Type V (from Rabbits).—"Obtained from the blood of an animal . . . of the genus Lepus, which has been immunized with cultures of a pneumococcus (Diplococcus pneumoniae) of one of the varieties known as . . . type V . . ." U. S. P. For standards see the U. S. Pharmacopeia XI, 1939, Second Supplement, under Serum Antipneumococcicum.

Antipneumococcic Rabbit Serum, Therapeutic Type V.—Prepared by immunizing rabbits with intravenous injections of virulent cultures of type V pneumococcus. The product is refined and concentrated by a method perfected in the firm's laboratories. The usual sterility and safety tests are carried out in accordance with the requirements of the National Institute of Health. The potency of the product is expressed in terms of the unit, based on satisfactory protection tests in mice. The unit is one-five hundredth cc. of the control serum distributed by the National Institute of Health, for type V pneumococcus antibody. The serum is marketed in ampule packages, each containing 20,000 units or 50,000 units of type V pneumococcus antibody. The Gilliland Laboratories, Marietta, Pa.

Antipneumococcic Serum, Type VII (from Rabbits).—"Obtained from the blood of an animal . . . of the genus Lepus, which has been immunized with cultures of a pneumococcus (Diplococcus pneumoniae) of one of the varieties known as . . . type VII . . ." U. S. P. For standards see the U. S. Pharmacopeia XI, 1939, Second Supplement, under Serum Antipneumococcicum.

Antipneumococcic Rabbit Serum, Therapeutic, Type VII.—Prepared by immunizing rabbits with intravenous injections of virulent cultures of type VII pneumococcus. The serum is refined and concentrated by a method perfected in the firm's laboratories. The usual sterility and safety tests are carried out in accordance with the requirements of the National Institute of Health. The potency of the product is expressed in terms of the unit, based on satisfactory protection tests in mice. The unit is one-nine hundredth cc. of the control serum distributed by the National Institute of Health, for type VII pneumococcus antibody. The serum is marketed in ampule packages, each containing 20,000 units or 50,000 units of type VII pneumococcus antibody. The Gilliland Laboratories, Marietta, Pa.

Antipneumococcic Serum, Type VIII (from Rabbit).—"Obtained from the blood of an animal . . . of the genus Lepus, which has been immunized with cultures of a pneumococcus (Diplococcus pneumoniae) of one of the varieties known as . . . type VIII . . ." U. S. P. For standards see the U. S. Pharmacopeia XI, 1939, Second Supplement, under Serum Antipneumococcicum.

Antipneumococcic Rabbit Serum, Therapeutic, Type VIII.—Prepared by immunizing rabbits with intravenous injections of virulent cultures of type VIII pneumococcus. The serum is refined and concentrated by a method perfected in the firm's laboratories. The usual sterility and safety tests are carried out in accordance with the requirements of the National Institute of Health. The potency of the product is expressed in terms of the unit, based on satisfactory protection tests in mice. The unit is one-two hundred and fiftieth cc. of the control serum distributed by the National Institute of Health, for type VIII pneumococcus antibody. The serum is marketed in ampule packages, each containing 20,000 units or 50,000 units of type VIII pneumococcus antibody. The Gilliland Laboratories, Inc., Marietta, Pa.

Pollen Extracts-Cutter.—The following additional forms of pollen extracts-Cutter (New and Nonofficial Remedies, 1940, p. 43) have been accepted: Acacia; Alder; Alfalfa; Alkali Rye Grass; Almond; Annual Blue Grass; Aspen; Barley; Bent Grass; Birch; Bract Scale; Brome Grass; Broncho Grass; Canada Blue Grass; Chapparal Broom; Cheat Grass; Chrysanthemum; Clover; Coreopsis; Cosmos; Cultivated Rye; Curly Dock; Dahlia; Dandelion; Date;

Deodar Cedar; Elm; English Walnut; Eucalyptus; False Coastal Ragweed; Field Oats; Field Wheat; Goldenrod; Greasewood; Hops; Incense Cedar; Koehler's Grass; Locust; Mesquite; Mexican Tea; Monterey Cypress; Mountain Sagebrush; Mustard; Pasture Sagebrush; Pecan; Perennial Rye Grass; Pickleweed; Poverty Weed; Prairie Sagebrush; Privet; Quack Grass; Rabbit Brush; Rose; Salt Grass; Shasta Daisy; Sheep Sorrel; Slender Wheat; Southern Ragweed; Spearscale; Spiny Amaranth; Squirrel Tail; Sugar Beet; Sunflower; Sweet Vernal; Sycamore; Tall Oat Grass; White Valley Oak; Willow; Yellow Pine. Cutter Laboratories, Berkeley, Calif.

Soluble Trituration Silver Picrate 20 Per Cent with Boric Acid 80 Per Cent.—A soluble mixture of silver nitrate-N. N. R. (New and Nonofficial Remedies, 1940, p. 486) 20 per cent, and boric acid, 80 per cent. John Wyeth & Brother, Inc., Philadelphia, Pa.

Silver Picrate Jelly, 0.5 Per Cent.—A water miscible jelly containing silver picrate-N. N. R. (New and Nonofficial Remedies, 1940, p. 486), 0.5 per cent in tragacanth jelly, 1.5 per cent. John Wyeth & Brother, Inc., Philadelphia, Pa.—*J. A. M. A.*, Aug. 10, 1940.

ACCEPTED DEVICES FOR PHYSICAL THERAPY

The following devices have been accepted by the Council on Physical Therapy of the American Medical Association for inclusion in its list of accepted devices for physical therapy:

Hogan No. 8870 Brevatherm.—This unit is recommended for medical and surgical diathermy. The cabinet size is 44 inches high, 22 inches wide and 16⅛ inches deep. The weight of the complete unit is 127 pounds. The power and oscillatory plant is enclosed in metal; the firm claims that this feature decreases the radiation of high frequency power from this oscillatory circuit since the housing is grounded. The firm states that other provisions for minimizing radio interference are made. The Council's clinical investigation of the apparatus revealed that the apparatus gave satisfactory clinical service. McIntosh Electrical Corporation, Chicago. —*J. A. M. A.*, Aug. 3, 1940.

PROPAGANDA FOR REFORM

An Electrical Engineer Blows a Fuse.—The Bureau of Investigation of the American Medical Association reports that Louis Bond Cherry of El Paso, Texas, said to be a retired electrical engineer, sent through the mails printed circulars, a booklet and specially prepared letters promoting his "Neuropo System of Restoring Health." This consisted of a chief nostrom "Neuropo" and supplementary products which, used singly or in combination, were represented to help bring about "rejuvenation" and to cure or relieve a wide variety of disorders. Among these were paralysis, locomotor ataxia, gonorrhea, prostatitis, pulmonary tuberculosis, pneumonia, diphtheria, mumps, chickenpox, scarlet fever, tapeworm, asthma, bronchitis, eczema, moles, warts, indigestion, blood poison, diabetes, pyorrhea, anemia, neurasthenia, pleurisy, neuralgia and even baldness. The Post Office Department became skeptical of these claims. It learned that Cherry's business was started in Kansas City but was moved to El Paso in February, 1932. Though Cherry claimed that it was incorporated in Texas, he was unable to furnish the date of incorporation, and it appeared that he was the only person connected with the enterprise, as he operated it from his home and had no employees, it was said. As he refused to give the Post Office inspectors the formulas for his several preparations, these products were purchased through the mails and analyzed by a government chemist, whose condensed reports follow: *Neuropo:* Ammonia, 18 per cent; potassium sulfate, iron and magnesium; volatile oils (including safrol); fatty (saponifiable) material; alkaloidal (?) material; proteins (claimed on label) present, but in very small amount; no mercury, salicylates, or iodides. *Neuropo Bath Lotion:* Ammonia, 18.7 per cent; potassium sulfate, with magnesium and iron; volatile oils (safrol and turpentine indicated); saponifiable fats and oils. *Neuropo Ointment:* Xylene; sodium carbonate, chloride and iodide; volatile oil (turpentine-like); fatty acids (calculated as oleic); saponifiable fats; mercury and iodine (probably as mercuric iodide in original); triethanolamine (an emulsifying agent) and gum indicated in small amounts; yellow fluorescent dye present; amount of protein (mentioned on label) insignificant. *Neuropo Enema Solution:* Ammonia, less than 1 per cent; iron, magnesium, potassium and sulfates; volatile oils (such as turpentine); fatty oils; gum indicated in very small amount. *Neuropo Douche Solution:* Ammonia, less than 1 per cent; magnesium, potassium, sodium and sulfates; volatile oils (such as turpentine); fatty material; yellow dye with strong green fluorescent present; gum indicated in very small amount. The Post Office memorandum on this case brought out that expert medical testimony showed the worthlessness and in some cases the actual harmfulness in using these nostrums for the conditions named. Cherry claimed that in addition to his "medicine" business he was also engaged in some chemical research work of a nonmedical type which would be hampered if a fraud order was issued against the names he used in his nostrum business. As he did not, however, offer to discontinue making and selling his "patent medicines," and as his claims for them were found "grossly fraudulent," the Post Office issued a fraud order against the names Louis Bond Cherry, Louis Bond Cherry Office and Laboratories, Cherry Laboratories and Neuropo Products Company, on Aug. 10, 1939.—*J. A. M. A.*, Aug. 3, 1940.

Misbranded Products.—The Bureau of Investigation of the American Medical Association reports that the Food and Drug Administration of the Federal Security Agency has issued the following Notices of Judgment: *Andree Eye Lash and Brown Colure* (Andree Laboratories, Coatesville, Pa.), containing paraphenylenediamine. *Dark Eyes* (Dark Eyes, Chicago), containing ammoniated silver nitrate and pyrogallol. *Hollywood Lash and Brow Dye* (Hollywood Lash Dye Co., Hollywood and Los Angeles), containing paraphenylenediamine. *Ideal Lash and Brow Dye* (George W. Eilert trading as the Ideal Lash & Brow Co., Los Angeles), containing paraphenylenediamine. *Lash Lure* (Lash Lure Cosmetic Manufacturing Co. or Cosmetic Manufacturing Co., Los Angeles), containing paraphen enediamine. *Mary Luckie Improved Lash and Brow Dye* (Mary Luckie, Inc., no address given), containing paraphenylenediamine. *Miller's Anti-Mole* (Miller Manufacturing Co., Lincoln, Nebr.), containing nitric and acetic acids. *Palmer's Antiseptic Skin Lotion* (Solon Palmer, New York), containing corrosive sublimate. —*J. A. M. A.*, Aug. 3, 1940.

Present Status of Injection Treatment of Hernia.—In September, 1936, the Council on Pharmacy and Chemistry published a report on the injection treatment of hernia based on the replies to a questionnaire which had been addressed to a selected list of hospitals throughout the country. After consideration of the replies the Council concluded that, although there are cases in which this treatment is applicable and effective, nevertheless it should be borne in mind that the attempted cure of hernia by the application of the method of adhesive inflammation is not new; that it had failed to establish itself as a routine method for such treatment and was still in an early experimental stage; further, that physicians who practice this method should realize the

dangers from an ethical, a legal and a financial point of view. To keep the Council's information up to date on this subject, the same questionnaire was again addressed to those hospitals which formerly replied. After due consideration of the second hospital survey and the reports in the recent literature, the Council voted to adopt this report to reaffirm its previous opinion that the injection method of treating hernia may not be recognized for general use and should be employed only by those with special experience and with full cognizance of the dangers involved in the use of such solutions. The Council now concurs in the opinion that the method involves less danger of serious complications than surgery when employed only in selected cases of hernia by those skilled in the injection of suitable standardized solutions of known composition and action. The Council is not, however, willing to recognize any such solutions for New and Nonofficial Remedies until sufficient follow-up experience in their application has been gained to establish the success of the injection method of treatment. Present evidence indicates that better types of solution are to be desired.—*J. A. M. A.*, Aug. 17, 1940.

Stuff from The Sea.—The Bureau of Investigation of the American Medical Association reports that the Post Office Department has issued a fraud order against a concern variously known as Dr. Fack's Institute and Dr. Fack's Health Institute, at San Antonio, Texas, and its officers and agents. Hugo R. Fack first came to the attention of the American Medical Association in 1928 at which time he was promoting an alleged rejuvenator from the orient (via Germany), known as "Lukutate," or "Dur-Inda," as it was later called (*The Journal of the American Medical Association*, April 23, 1932). In 1929 it was reported that Fack was operating from Orlando, Fla., an outfit first known as the "Natural Healing Institute" and later called the "Vitae Health Products Co." In the same year it was said that he moved this concern to San Antonio, Texas, and advertised the "Tonsalvator," a device for treating enlarged and diseased tonsils. In 1933 a letter was sent out on a printed letterhead bearing the imposing title "Dr. Fack's Institute & Sanitorium—Naturopathic Clinic and Rest Home." The Fack letter played up not only the "Tonsalvator" but also something called "Sepdelenopathy" and described as "treatment for the elimination of toxic materials." An accompanying circular offered various nostrums by Fack, including "Fruitellax," for constipation, "Piscin—the Superior Substitute of Codliver Oil in Powderform," and "Vitae Herbs," an apparent cure-all "biologically blended after the ancient significative doctrine." Finally there was "Dr. Fack's Femi-Sanax, an instrument of far-reaching therapeutic results in feminine sufferings." In recent years Fack has been putting out "Vegesan," described as "the essentially supplementary food in fine powder form, supplying to the system all of the needed organic materials and vitamins." Also it was claimed that "Vegesan is a pure vegetable food, which grows in certain Southern Oceanic regions." The Post Office memorandum by virtue of which the mails were closed to this scheme (October, 1939) pointed out that Fack had sold his Vegesan through the mails under the false and fraudulent representations that, regardless of any disease or affection involved, Vegesan would restore those who took it to permanent health: that it would prevent or cure goiter, anemia, rickets, obesity, pyorrhea, constipation, "auto-intoxication," catarrh, deafness, "old age," any disease of the heart or liver, insanity, insomnia, diabetes, sterility, and a few other things! Fack was said to have obtained the material for Vegesan in wholesale quantities from a Los Angeles concern and to have repacked it in his home. According to the Post Office Inspector in the case Fack, when first interviewed, stated that he did not know the composition. Government chemists reported that a microscopic examination showed it to be composed entirely of dry, finely ground seaweed, or kelp; that the only substances it contained in therapeutic quantities were iodine and vitamin A, and that any other minerals and vitamins present were too inconsiderable in amount to have any medicinal value. The government presented expert medical evidence that Vegesan would not overcome obesity, gland disturbances, slow and defective sexual development, toxemia, insanity, tooth decay and the rest of Fack's category and that these conditions require painstaking individual diagnosis with a view to finding the underlying factors responsible for the disease and the employment of personalized procedure adapted to the patient's needs. Fack apparently set himself up as an authority on diet, as he sent out advice on the use of foods in connection with Vegesan. These instructions urged the purchase of his "De-Tox-San" and "Sepdelen."—*J. A. M. A.*, Aug. 17, 1940.

Aurex Hearing Aid.—This unit consists of three main components: (1) a microphone and amplifier assembly of rectangular shape, 5 by 2¼ by ⅝ inches in size and weighing 135 Gm., (2) a miniature crystal receiver with a molded soft rubber earpiece, which is three-fourths inch in diameter, one-fourth inch thick and weighs 10 Gm., and (3) a combination assembly of A and B batteries having a total weight of 304 Gm. The unit was tested in a laboratory acceptable to the Council. The Council reports that for the most efficient use the earpiece should be molded to fit each individual patient's ear. The Aurex Corporation, Chicago.—*J. A. M. A.*, July 6, 1940.

Acousticon Hearing Aids Gold Medal Models.—The Acousticon, Gold Medal Models, GM-1 and GM-2, are wearable hearing aids adaptable to use with bone or air conduction. With the microphone turned full on there is a tendency for the instrument to feed back with the air conduction receiver, thus limiting the range of full amplication and fitted ear piece should be fitted carefully. There is no feed back difficulty with any combination using the bone conduction receiver. The instrument is pleasing in appearance and all parts are mechanically well made. Dictograph Products Company, Inc., New York.

NEWS

Hillcrest Memorial Hospital Staff, Waco, elected the following officers at a recent meeting, advises the Waco *Tribune-Herald:* President, Dr. M. C. Carlisle; vice-president, Dr. M. Brian Aynesworth, and secretary, Dr. Clayton J. Traylor.

University of Texas School of Medicine Staff was recently increased by the addition of the following instructors, according to an announcement by Assistant Dean Dr. Jarrett E. Williams in the Galveston *News:* Dr. E. W. Griffey, instructor in ophthalmology; Dr. Henry S. Meyer, instructor in clinical pediatrics; Drs. Keith Bradford, John McGivney and C. F. Mares, instructors in surgery.

The Tri-State Medical Society of Texas, Louisiana and Arkansas, completed its two-day annual session at Shreveport, Louisiana, with the election of the following officers: President, Dr. R. B. Robbins, Camden, Arkansas; vice-president from Texas, Dr. Allen Collom, Texarkana; vice-president from Louisiana, Dr. Robert T. Lucas, Shreveport; vice-president from Arkansas, Dr. Joe M. Rushton, Magnolia, and secretary-treasurer, Dr. William Hibbitts, Texarkana. Texarkana was selected for the place of meeting of the 1941 convention.—*Shreveport Times.*

Hooker Hospital-Clinic.—The Hooker Hospital-Clinic, Carthage, was opened September 18. The

building is veneer, one-story, and located three blocks west of the business district. It was constructed at an approximate cost of $8,500 and equipped for $6,000. The outside brick is painted white and the roof is creosoted redwood shingles, stained brown. The floors are hardwood throughout. Attic ventilation and automatic floor furnaces provide equable temperature summer and winter. The building contains ten rooms and has a maximum capacity for five patients with two bassinets. In addition there is an operating room, x-ray and clinical laboratory rooms, a physiotherapy room and the usual hospital facilities. At present there are no accommodations for negro patients but plans are being made for an annex to the building for this purpose. The hospital is privately owned by Dr. Lynn C. Hooker, but will be operated on an open staff basis. Miss Leila Maye White is superintendent.

HOOKER HOSPITAL-CLINIC, CARTHAGE

Pittsburg Medical and Surgical Hospital, Pittsburg, held a formal opening September 27, states the Pittsburg *Gazette*. The building is a gray brick veneer structure of one story, designed in an L shape, containing twenty rooms, each with outside ventilation. The hospital has accommodations for twelve adult and four pediatric patients, in addition to operating, x-ray, and maternity rooms. There is provision, also, for nurses' quarters and for the usual hospital facilities.

The hospital is owned and under the management of Drs. J. H. Mitchell, R. Y. Lacy, R. L. Johnson and P. A. Reitz, all of Pittsburg. The formal opening was attended by 375.

Lubbock Plans for Care of Indigent.—A Committee from the Lubbock County Medical Society, composed of Dr. W. L. Baugh, county health officer, who was spokesman; Drs. J. T. Hutchinson, Sam G. Dunn, F. B. Malone, and Arthur Jenkins, president, appeared before the Lubbock city commission recently with recommendations regarding the medical care of indigent cases in Lubbock. The recommendations provided "that a committee of perhaps five members be named to decide just what an indigent case is. That would involve, it was explained, a decision as to where the income dividing line would be between the persons able to pay for medical treatment and those not able to pay.

"That a full-time city-county health officer be named with an assistant and a public health nurse, the entire department to be established 'under the city's own roof.'

"That community immunization in all contagious cases, and particularly in venereal disease cases, be practiced as a matter of protection to the community health. That would involve the provision at public expense of the medicines necessary for such protection for those unable to pay those costs themselves." —*Lubbock Avalanche.*

The Texas Children's Hospital, Dallas, recently constructed at a cost of $300,000, was opened to receive patients September 12, the formal opening being held October 15. The new hospital with Freeman Memorial Clinic and the Bradford Memorial Hospital will form a children's medical center. The Bradford Hospital will care for children up to two years of age. The Texas Children's Hospital will hospitalize patients from three to twelve years, inclusive, and will work closely with Freeman Memorial Clinic to which it is attached physically. The building is a three-story structure. The first two floors provide fifty-seven beds, including seven private rooms, in addition to a kitchen and treatment rooms, and on the north side of the second floor, a play room for convalescents. Partitions, the upper part of glass, divide the bed spaces in the wards. The third floor, which covers only the center of the building is given to living quarters for the interns and staff physicians.—*Dallas News.*

The Texas Dermatological Association held a joint meeting with the Oklahoma Dermatological Association October 13 at Dallas, with nineteen members of the Texas Association and ten members of the Oklahoma Association present, in addition to nine guests.

A clinic was held at Baylor University Hospital, and seventeen cases were presented and discussed.

Dr. George T. Caldwell, Professor of Pathology, Baylor University College of Medicine, gave an address on cancer.

At the business meeting Dr. A. B. Abshear, San Antonio, and Dr. Earl Loftis, Dallas, were elected to membership.

The Society voted that attendance on future meetings would be limited to members of the Dermatological Society only and that a notice of this limitation be published in the JOURNAL in connection with the program of each meeting.

A committee composed of Drs. C. F. Lehmann, J. Lewis Pipkin, and D. O. Poth were appointed to make necessary revisions in the constitution and by-laws.

The next meeting of the Association will be held May 12, 1941, at Fort Worth, immediately preceding the annual session of the State Medical Association.

The Texas Surgical Society held its fall semi-annual meeting October 7 and 8 at the Rice Hotel, Houston. Guest speakers were Dr. A. W. Adson, Rochester, Minnesota, and Dr. Maxwell Harbin, Professor of Orthopedic Surgery, Western Reserve University, Cleveland, Ohio.

The following scientific program was carried out:

Some Comments on the Roentgenological Diagnosis of Intestinal Obstruction—H. W. Cochran, M. D., Dallas.
Gastric Obstruction in Infants—G. R. Enloe, M. D., Fort Worth.
Cancer of the Rectum, Sigmoid and Anus: A Review of Forty Cases Seen During the Year 1939—Herbert Hayes, M. D., Houston.
Cancer of the Rectum—A. O. Singleton, M. D., Galveston.
Intraventricular Tumors—C. C. Nash, M. D., Dallas.
The Differential Diagnosis and Treatment of Neuralgias of the Face—A. W. Adson, M. D., Rochester, Minnesota.
Cutaneous Ureterostomy—H. A. O'Brien, M. D., Dallas.
The History of Limited Surgical Societies—M. W. Sherwood, M. D., Temple.
Fatal Abdominal Wall Infection Following Appendectomy—R. J. White, M. D., Fort Worth.
Ankylosis of the Mandible—G. W. N. Eggers, M. D., Galveston.
Surgery of the Knee Joint—Maxwell Harbin, M. D., Cleveland, Ohio.
Pancreatic Lithiasis with Diabetes—T. H. Thomason, M. D., Fort Worth.

A complimentary luncheon was given members of the Society on the first day of the meeting by Houston members. Houston members were also hosts at a cocktail party at the Rice Hotel the evening of the first day, preceding the dinner of the Society.

At the business meeting the following officers were elected for the ensuing year: President, Dr. W. L. Crosthwait, Waco; first vice-president, Dr. R. E. Cone, Galveston; second vice-president, Dr. H. A. Peterson, Houston; secretary, Dr. Walter G. Stuck, San Antonio (re-elected); and treasurer, Dr. C. B. Carter, Dallas.

The next meeting of the Society will be held April 7 and 8, 1941, in Temple.

The local arrangements committee for the Houston

meeting was composed of Drs. E. W. Bertner, chairman; J. Allen Kyle, and Judson L. Taylor.

The Texas Association of Obstetricians and Gynecologists held its annual meeting October 5, in the Falls Hotel, Marlin, with an attendance of forty-five fellows and fourteen visitors. Dr. H. Reid Robinson, Galveston, presided.

Dr. N. D. Buie, Marlin, president-elect of the State Medical Association, gave the address of welcome.

Dr. Charles Mazer, Philadelphia, Pennsylvania, was the guest speaker and delivered the J. F. Y. Paine address.

The morning session was devoted to registration, the showing of a motion picture, and the presentation of cases by local fellows, following which the cases were discussed.

Luncheon was held at the Torbett Sanitarium.

The following scientific program was carried out in the afternoon:

The Displaced Uterus and Its Surrounding Structures—Carey Hiett, M. D., Fort Worth.
Congenital Deformities Following Threatened Abortion—J. W. Bourland, Jr., M. D., Dallas.
The Kidney Following Toxemias of Pregnancy—George T. Caldwell, M. D., Dallas.
The Pituitary Synergist (J. F. Y. Paine address)—Charles Mazer, M. D., Philadelphia, Pennsylvania.

Dr. and Mrs. Howard Smith of Marlin, entertained members of the Society in the evening preceding the Society dinner. On the last named occasion Dr. H. Reid Robinson, Galveston, delivered the President's Address, and Dr. Charles Mazer, guest speaker, spoke on the subject, "Endocrine Factors in the Barren Marriage."

At the business meeting the following officers were elected: President, Dr. Roy Grogan, Fort Worth; president-elect, Dr. Minnie Maffett, Dallas; vice-president, Dr. Minnie C. O'Brien, San Antonio; and secretary-treasurer, Dr. Julius McIver, Dallas (re-elected).

The following physicians were elected to membership: Drs. J. A. Clapp, Arthur Faris, and Goldie S. Ham, Houston; Lee Glober and Foster Moore, San Antonio; John S. Minnett (junior membership), W. P. Devereaux (junior membership), C. B. Sacher, and F. J. Sebastian, Dallas; A. L. Nelson, Nacogdoches; and M. A. Walker, Jr., Paris.

The Association will hold its 1941 meeting in Galveston.

The Texas Public Health Association held its eighteenth annual meeting at the Blackstone Hotel, Fort Worth, September 30 and October 1 and 2, with a total attendance of 411. Dr. George A. Gray, Sweetwater, presided at the general sessions.

Texas physicians contributing to the program included Drs. L. H. Reeves, Fort Worth; George W. Cox, State Health Officer, Austin; W. L. Baugh, Lubbock, member State Board of Health; F. R. Lummis, Houston; N. D. Buie, Marlin, president-elect, State Medical Association, and E. H. Cary, Dallas. Out-of-state speakers included Surgeon C. C. Applewhite, Regional Consultant, U. S. Public Health Service, New Orleans; Dr. Francis Rothert, Regional Medical Consultant, Children's Bureau, U. S. Department of Labor, New Orleans; and Dr. J. R. Heller, Jr., Regional Consultant, U. S. Public Health Service, New Orleans.

Entertainment features in connection with the meeting included a barbecue dinner with floor show and dance at the Pioneer Palace, the evening of the first day; a dinner dance at the Blackstone Hotel, with floor show and dance, the evening of the second day, and sight seeing trips to the U. S. Public Health Service Hospital at Fort Worth and other points of interest.

The following officers were elected for the ensuing year: President, Dr. George A. Gray, Sweetwater; president-elect, Dr. Burke Brewster, Fort Worth; first vice-president, Miss Ruth Albrecht, Austin; second vice-president, Dr. Austin E. Hill, Houston; executive secretary, P. A. Kerby, Austin (re-elected); and treasurer, Alan C. Love, Austin.

The 1941 annual meeting will be held in Corpus Christi at a time to be selected later.

The Texas Society of Medical Technologists held its annual meeting October 11-12, at the Gunter Hotel, San Antonio. Texas physicians who addressed the meeting included Dr. Boen Swinny, San Antonio, who delivered an address on the subject, "Laboratory Procedures Used in Allergy," and Dr. M. Bodansky, Galveston, who spoke on the subject, "The Chemistry of the Sulfapyridine and Sulfanilamide Determinations."

At the business meeting, the following officers were elected for the ensuing year: President-elect, Mrs. C. M. Pitts, Austin; vice-president, Will Anne Staude, Fort Worth; treasurer, Louise Hooper Cox, Dallas; secretary, Vera Dunn, Corpus Christi; and board of directors, Paul Lea, Lubbock; Clyde C. Hays, Waco; Mrs. Pauline Dimmitt, Sherman; J. E. Storey, Abilene; H. A. Bardwell, San Antonio; George Thomas, Beaumont. Nylah Tom, Austin, president-elect, assumed the office of president at the conclusion of the meeting.

The next meeting of the Society will be held in Fort Worth, immediately preceding the annual meeting of the State Medical Association in that city.

American Conference on Industrial Health will be held November 14, at the Towers Club, Chicago, under the sponsorship of the American Association of Industrial Physicians and Surgeons. The purpose of the conference is to obtain a correlation of viewpoints of all persons interested in promoting industrial health, including employers, physicians, industrial hygienists, labor, psychiatrists, insurance companies, public relations counsels, safety experts and the legal profession.

Dr. Morris Fishbein, editor of *The Journal of the American Medical Association*, will speak at a convention session and at a dinner concluding the conference.

The Houston Section, International Association for Dental Research will hold its next meeting November 26, in the Auditorium of the Medical Arts Building, Houston. All members of the State Medical Association of Texas are cordially invited to attend. Dr. Edward Taylor, dental member of the staff of the State Department of Health, will be the principal speaker. The title of his discussion will be "Preliminary Studies in Caries Immunity in Deaf Smith County Area."

Personals

Dr. W. B. Carrell, Dallas, was a guest speaker at the tenth annual clinical conference of the Oklahoma City Clinical Society, October 28-31.

Dr. H. S. Pardue, Harleton, received a broken hip, bruises and lacerations in an automobile accident September 21, advises the Fort Worth *Star-Telegram*.

Dr. Ralph H. Homan, El Paso, Councilor of the First District of the State Medical Association has been called to active duty and stationed in the Marine Base Hospital, Parris Island, South Carolina. Dr. Homan anticipates being away from his practice for a year and perhaps longer. *Dr. Joel Wright*, Alpine, Vice-Councilor of the First District, will assume the duties of the Councilor during Dr. Homan's absence.

Dr. George M. Hilliard, medical director of Baylor Hospital since 1938, has been named administrator of the hospital, advises the Dallas *News*. The office of administrator had been vacant since July, 1939, when Bryce L. Twitty resigned to become administrator of Group Hospital Service, Inc.

Dr. W. B. Brooks, Borger, was recently elected president of the Hutchinson County Tuberculosis Association, states the Borger *Herald*.

Dr. H. G. Pfeiffer, Fredericksburg, is taking postgraduate work in obstetrics and gynecology at the New York Polyclinic Medical School and Hospital, informs the Fredericksburg *Radio-Post.*

Dr. E. W. Wright, Bowie, a member of the State Board of Health, received several broken ribs and bruises as the result of an automobile accident near Decatur, September 30, while en route to Fort Worth to attend a meeting of the State Board of Health, advises the Fort Worth *Star-Telegram.*

Dr. Robert J. Hanks, Sanatorium, has returned from six weeks postgraduate study on diseases of the chest, four weeks at Trudeau Sanatorium and two weeks at Bellevue Hospital, New York City.

Lieut. Col. H. F. Philips, M. C., U. S. Army, has assumed the duties of professor of military science at Baylor University School of Medicine, succeeding Col. A. A. McDaniel, transferred to another position. Colonel Philips was professor of military science in Baylor several years ago.—*Dallas News.*

Dr. and Mrs. S. D. Moore of Van Alstyne, held open house to their friends, the afternoon of September 8, in observance of their golden wedding anniversary. The occasion was also a reunion for the immediate family of Dr. and Mrs. Moore. One hundred and seventy-five guests called. Dr. Moore has been practicing medicine for fifty-four years in Van Alstyne—*Van Alstyne Leader.*

Dr. Alvin Baldwin, Jr., Olney, left October 7, to specialize in proctology in the Graduate School of Medicine, University of Pennsylvania, at Philadelphia.—*Olney Enterprise.*

Dr. W. B. Lasater, Mineral Wells, has returned from postgraduate work at Tulane University School of Medicine, New Orleans, informs the Mineral Wells *Index.*

Dr. W. J. Stork, Houston, has been taking postgraduate work in radiology in New York City, advises the Houston *Post.*

Dr. Frank C. Beall, Fort Worth, was recently elected president of the Texas Bridge Association at the close of its three-day session in San Antonio. Dr. Beall and William C. Moody were announced first place winners in the tournament of the Association. This will be the third term of office as president for Dr. Beall.—*Fort Worth Star-Telegram.*

Dr. Wallace B. Wilkinson, Dallas, was recently awarded the Owen George cup as the Oak Cliff citizen, who in the opinion of the committee of the Oak Cliff Chamber of Commerce, has performed the most outstanding service in his community, advises the Dallas *Journal.* Dr. Wilkinson was selected because of his work for underprivileged children in the clinic of the Oak Cliff Lions Club.

Marriages

Dr. Martin Lee Towler to Miss Hetta Groos Jockusch, both of Galveston, September 28, 1940.

Dr. Grace Hood of Fort Worth, to Mr. Derwood Morton of Arlington, in Dallas, September 12, 1940.

Dr. Enga M. Arnold of Houston, to Mrs. Eugenia H. O'Neill of Toledo, Ohio, in New Orleans, Louisiana, April 11, 1940.

Dr. W. B. Thorning, Jr., of Houston, to Miss Louise D. Jones of Memphis, Tennessee, in Houston, May 25, 1940.

Births

To Dr. and Mrs. R. W. Pickett, of Texarkana, a son, John Campbell Pickett, June 7, 1940.

To Dr. and Mrs. W. L. Bush, San Angelo, a daughter, Katherine Barrie Bush, May 11, 1940.

To Dr. and Mrs. F. Leon Hutchins, San Angelo, a son, Robert Leon Hutchins, July 22, 1940.

To Dr. and Mrs. Carl A. Kunath, San Angelo, a son, Carl Edwin Kunath, August 19, 1940.

To Dr. and Mrs. Ross Owens of Alexandria, Louisiana, a daughter, Lucia Kay Owens, September 23, 1940.

To Dr. and Mrs. Palmer Wigby, Dallas, a daughter, Caren Elaine, September 25, 1940.

To Dr. and Mrs. Samuel Stuart, Dallas, a daughter, Mary, August 6, 1940.

To Dr. and Mrs. Frank J. Iiams, Houston, a daughter, Mary Elizabeth, July 14, 1940.

To Dr. and Mrs. C. Forrest Jones, Houston, a daughter, Andra Jane, June 15, 1940.

To Dr. and Mrs. Edward T. Smith, Houston, a daughter, Martha Celeste, August 18, 1940.

To Dr. and Mrs. J. Griffin Heard, Houston, a son, John Gregory, June 12, 1940.

To Dr. and Mrs. John M. Filippone, Houston, a son, Marion Vincent, August 7, 1940.

To Dr. and Mrs. Marvin Lamb, Jacksonville, a daughter, Lynda Marcile, August 14, 1940.

To Dr. and Mrs. Elmer Haynes, Rusk a son, Richard Justis, June 5, 1940.

To Dr. and Mrs. Harbert Davenport, Jacksonville, a son, Harbert William, July 9, 1940.

To Dr. and Mrs. C. H. Stripling, Jacksonville, a son, Clifford Bennett, June 29, 1940.

SOCIETY NEWS

Baylor-Knox-Haskell Counties Society

September 17, 1940

(Reported by T. W. Williams, Secretary)

Pathogenesis of Coronary Disease (lantern slides)—W. B. Whiting, Wichita Falls.
X-ray Therapy—C. A. Wilcox, Wichita Falls.

Baylor-Knox-Haskell Counties Medical Society met September 17, 1940, at the Home Economics Cottage in Munday with eleven members present. After dinner the scientific program as given above was carried out.

Brazos-Robertson Counties Society

September 17, 1940

Stomach Ulcers—George Waldron, Houston.
Sciatic Disturbances—James Greenwood, Jr., Houston.

Brazos-Robertson Counties Medical Society met September 17, 1940, in Hearne, with seventeen members and two visitors present. W. M. Boguskie, president, presided, and the scientific program as given above was carried out.

Clay-Montague-Wise Counties Society

June 27, 1940

(Reported by W. T. Inabnett, Secretary)

Modern Treatment of Snake Bite—R. S. Fillmore, Jacksboro.
Drugs Used in the Treatment of Hay Fever and Asthma—G. J. Seibold, Wichita Falls.

Physicians of Clay county were hosts to the Clay-Montague-Wise Counties Medical Society at a barbecue-picnic June 27, 1940, in Henrietta. The meeting was well attended and the scientific program as given above was carried out.

Coleman County Society

September 17, 1940

Coleman County Medical Society held a barbecue as its annual social meeting September 17, 1940, at Lake Scarborough, near Coleman, Texas. S. N. Aston, president, presided, and about fifty physicians and visitors attended, including the wives of physicians and out-of-town guests. Thirty barbecued chickens with all the trimmings were served.

Dallas County Society

June 27, 1940

(Reported by W. W. Fowler, Secretary)

Obscure Heart Disease—Hubert F. Hawkins, Dallas.
Heat Exhaustion of Non-industrial Origin—Walter Moursund, Dallas.
In Defense of Sub-mucous Resection (lantern slides)—C. D. Winborn, Dallas.
An Introduction to Hope Cottage—Mrs. Glen Carson, Dallas.

Dallas County Medical Society met June 27, in the

Medical Arts Auditorium, Dallas, with forty-one members present. Curtice Rosser, president, presided, and the scientific program as given above was carried out.

The paper of Dr. Hawkins was discussed by George Carlisle, and the presentation of Dr. Moursund was discussed by J. M. Hill. The paper of Dr. Winborn was illustrated with lantern slides showing the anatomy of the nose and types of deformity and was discussed by L. M. Sellers, O. M. Marchman, and J. D. Singleton.

Mrs. Glen Carson, executive secretary of Hope Cottage, described how the Cottage is conducted and operated.

New Members.—L. D. Beddow was elected to membership on application.

Other Proceedings.—The Secretary was authorized to secure a seal for the Society.

Guy F. Witt, reporting for the committee on recommendations for increasing the entertainment fund, stated that his committee recommended that the dues of the Society be raised $1.00 per year and that this amount be placed in a separate fund for entertainment, this recommendation to be acted upon at the first meeting of the Society in September. The report of the committee was received.

Curtice Rosser introduced an amendment to the constitution of the Society providing that the executive council of the Society should consist of the president, past-president, secretary and the chairman of the board of censors, the duties of the council being to carry on required activities of the Society between its meetings and to make such recommendations as it sees fit to the Society. The amendment will be acted upon at the first meeting of the Society in September.

David W. Carter, Jr., reporting for the officers of the Dallas Medical Plan, stated that the plan was in operation, and 440 members of the Ford Motor Company had been signed up for the present.

September 12, 1940

(Reported by W. W. Fowler, Secretary)

Sarcoma of the Heart: Case Report—C. A. Ault, Jr., Dallas.
Orthoptics as Related to General Medicine—Elizabeth Williams, Dallas.
Coccydynia (lantern slides)—Donald G. Kilgore, Dallas.

Dallas County Medical Society met September 12, in the Medical Arts Auditorium, Dallas, with sixty-four members present. Curtice Rosser, president, presided, and the scientific program as given above was carried out.

C. A. Ault, Jr., exhibited roentgenograms in the case reported by him of sarcoma of the heart.

The paper of Elizabeth Williams was discussed by H. F. Hawkins and John O. McReynolds.

The paper of Donald G. Kilgore was discussed by J. G. Kerr and F. L. Butte.

Everett C. Fox gave a report on the Dallas County Medical Plan which has been in operation for two full months. It was stated that every indication was that the plan would operate successfully, and for the particular group served, the subscription rate would apparently be quite adequate. Five appendectomies were done in July and five tonsillectomies in August. Thirty-three new patients had been served. A fee schedule had been established representing the average minimum fees for service rendered in the community and it was thought this would work satisfactorily to both patients and physicians, since payment is guaranteed by the plan, there are no collection problems and the clientele represents a low income group. The financial aspects of the plan have been satisfactory as far as its administration is concerned. The directors and the clientele served are well pleased with the two months' of operation and believe that the plan can be definitely and successfully operated as a non-profit corporation and can pay better fees more promptly to the physician and give more complete coverage to the subscriber than is possible under any other plan.

President Curtice Rosser introduced the new members who were present.

The recommendation by the committee on entertainment fund that the annual dues be raised $1 each year and this amount placed in a separate fund for entertainment, was brought up for final action. On motion of J. G. Kerr, duly seconded, the recommendation was unanimously adopted.

A pending amendment to the constitution brought up for final action was amended on motion of Everett C. Fox to read as follows: "The Executive Council shall consist of the president, immediate past president, secretary, and the chairman of the board of censors. Its duties shall be to carry on required activities of the Society between its meetings and make such recommendations as it sees fit to the Society." The amendment was adopted unanimously.

The secretary read a resolution previously adopted by the Dallas County Hospital Council providing that Dallas hospitals coöperate in attempting to have all surgical cases except emergency surgery and certain types of minor surgery admitted to hospitals by 4:00 p. m. the day previous to surgery in order that necessary laboratory work and histories may be accomplished prior to surgery, and urging that the Society join in the resolution.

New Members.—E. Stephen Stanley and T. Haynes Harville were elected by transfer respectively from the Tom Green Eight County Society, Texas, and the Washtenaw County Medical Society, Ann Arbor, Michigan.

Edward White moved that the question of payment for medical service for city employees treated at Parkland Hospital be referred to the medical economic relations committee with the instruction that the committee report their recommendations on this subject at the next meeting.

Grimes County Society

September 26, 1940

(Reported by H. L. Stewart, Secretary)

Deficiency Diseases—A. M. Dashiell, State Health Department, Austin.

Grimes County Medical Society met September 26, 1940, at the home of Dr. H. L. Stewart, Navasota, with sixteen physicians and guests present. The scientific program as given above was carried out.

Hunt-Rockwall-Rains Counties Society

September 10, 1940

(Reported by M. L. Wilbanks, Secretary)

Some Eye Observations—J. W. Ward, Greenville.
Diagnosis and Surgical Treatment of Acute Diseases of the Abdomen—W. P. Philips, Greenville.
Clinical Cases—W. B. Reeves, Henry C. Wilson, and N. J. Atkinson, Greenville.

Hunt-Rockwall-Rains Counties Medical Society met September 10, in the Court Room of the Municipal Building, Greenville, with seventeen physicians present. O. H. Trimble presided in the absence of the president and vice-president. The scientific program as given above was carried out. The papers of J. W. Ward and W. P. Philips were discussed by W. B. Reeves, Oscar Smith, C. T. Kennedy, Joe Becton, W. C. Morrow and E. R. Hayes.

W. B. Reeves reported the case of a baby that was perfectly normal for three weeks after birth, following which all foods were refused. The baby was otherwise apparently normal. Tube feeding by the nose was resorted to. The baby is now several months old and although food is still refused is gaining in weight under the present regime.

N. J. Atkinson reported the case of a negro man with a lesion on the tongue. The Wassermann reaction was negative and the lesion had been diagnosed as tuberculous.

Henry C. Wilson reported a clinical case.

New Member.—S. L. Wadley, Royse City, was elected to membership on transfer from the Ellis County Medical Society.

Henry C. Wilson reported that a full time dental surgeon had been employed for Hunt County by the State Board of Health. Dr. Wilson also reported the availability of a mobile tuberculosis x-ray clinic operated by the State Health Department. W. L. Wilbanks moved that the secretary be directed to make application to the State Health Department for the operation of the clinic in Hunt County, which motion was seconded by Joe Becton. The clinic will be available to all indigent tuberculous patients referred to it by reputable physicians.

Following a discussion of whether a refresher course should be held, a committee was selected composed of W. B. Reeves, C. T. Kennedy and W. C. Morrow to arrange for the time and place of the course and to nominate the speakers.

E. R. Hayes, director of the venereal disease clinic, extended a special invitation to members of the Society to visit the clinic.

W. P. Philips reported on the proposed city-county hospital.

Jefferson County Society

September 9, 1940

(Reported by W. Price Killingsworth, Secretary)

Clinical Case Report—Harris Hosen, Port Arthur.
Diagnosis of Difficult Cases of Anemia—Henry M. Winans, Professor of Medicine, Baylor University College of Medicine, Dallas.

Jefferson County Medical Society met September 9, at the Hotel Dieu Hospital, Beaumont, with sixty members present. James W. Long, president, presided and the scientific program as given above was carried out.

Harris Hosen presented a case of a child, age 4, who had received an injury to the abdomen as the result of a fall across the foot of the bed. The child presented the symptoms of an acute abdominal condition but the first blood count made was normal. Later the blood count showed significant changes in the leukocytes and differential count. At operation, hemorrhage was found in the region of the appendix with rupture of the posterior lateral portion of the ileum and collapse of the gut. Recovery was uneventful. Dr. Hosen stressed the value of repeated blood counts in such cases.

Diagnosis of Difficult Cases of Anemia (Henry M. Winans).—The paper presented was based on a recent review of 500 cases of the author in his own practice. The subject was discussed under the following headings:

(1) Chronic blood loss, as associated with excessive menstrual flow, blood loss from any portion of the body, but more especially from the gastro-intestinal tract.

(2) Hemolysis of red blood cells, as in chronic familial icterus.

(3) Myelophthisis, as associated with malignant tumors, and tumor metastasis, leukemia, Hodgkin's disease, osteosclerosis, and Paget's disease.

(4) Nitrogen retention diseases, usually associated with the nephritides, but may be associated with chronic intestinal obstruction, or tumor disintegration of fibroids, infections, or beginning malignant hypertension.

In chronic blood loss Dr. Winans pointed out that the color index is reduced from .75 to .5, there is increased resistance of the red blood cells to saline solution $\frac{.3 \text{ to } .25,}{.42}$ normal reticulocytes, icterus index, and platelets are normal.

In the hemolytic group the color index is reduced from .64 to .12, resistance to saline is decreased .5 to .4, there is marked increase in reticulocytes up to 25 per cent, the icterus index is high (15 to 20 per cent), and platelets are increased.

In the myelophthisic group the color index is normal, 0.77 to 1.0, there is normal resistance to saline and increased number of nucleated red cells. Reticulocytes are normal. Icterus index, leukocytes and platelets are normal to variable. The important factor here is that the bone marrow is depressed.

In the nitrogen retention group, the color index and resistance to saline are normal. The reticulocytes are markedly reduced, from .20 per cent to .03 per cent. Icterus index and platelets are normal. These patients are unable to utilize enough of substances that the bone marrow needs for normal functioning, namely, protein, iron, and anti-anemic substance from the liver.

In patients with essential hypertension which becomes malignant hypertension, the anemia precedes the change, that is, the nitrogen retention comes after anemia. Any infection, however, will produce this same anemia.

The essayist asserted that the so-called "complete blood count," which usually includes only an estimation of the hemoglobin, red blood cell count, leukocyte count and differential, with a careful study of the stained smear, is a misnomer. He averred that a complete blood count should include also color index determination, a study of saline resistance, reticulocyte and platelet count, icterus index test, and, in many cases, bone marrow studies, obtained by biopsy. He made a plea for more careful study of the anemias. The four types of anemias discussed by the author are the least frequently diagnosed and will not respond to shotgun iron, liver or vitamin therapy. First, the cause of chronic blood loss should be removed, if possible; in chronic familial icterus the spleen should be removed; in the myelophthisis, deep x-ray therapy is indicated to remove pressure from the bone marrow. In the last named type, leukemia should always be suspected.

The paper was discussed by H. B. Williford, Harris Hosen, W. Price Killingsworth, C. B. Shaddock, Jr., J. C. Crager, John Bevil, Grady Bevil, T. A. Tumbleson, L. C. Powell and L. T. Pruit.

Dr. Winans, in closing the discussion, pointed out that at present there are no adequate scales for the estimation of hemoglobin, especially under 40 per cent. When iron therapy is used changes should not be expected for from five to ten days; on the other hand, in parenteral liver therapy change may be expected almost the next day.

Miss Olive Parrish and Mr. Huffman of the Audiophone Company of Houston, presented a short talking motion picture, "Life Begins Again." The film was prepared by the Bell Telephone Laboratories and dealt with the mechanism of hearing.

L. C. Heare, chairman of the committee appointed to study the desirability of a standard health unit, gave the report of that committee recommending that the Society approve in principle the full time county health unit, and, further, that an invitation be extended to the Texas State Health Department to investigate the feasibility of establishing such a unit in Jefferson County. Van C. Tipton of the State Health Department spoke briefly in regard to county health units and answered questions propounded by members.

Resolutions of condolence were adopted on the death of the late Dr. Frank Mabry.

New Member.—W. M. Covode, Port Arthur, was elected to membership.

Kimble-Mason-Menard-McCulloch Counties Society

September 2, 1940

Kimble-Mason-Menard-McCulloch Counties Medical Society met September 2, 1940, at the Brady Hospital, Brady, with fourteen members present. Papers were presented by R. C. Curtis and W. A. Chernosky, both of Temple. A technical motion picture film was also shown.

Milam County Society

October 10, 1940

(Reported by C. G. Brindley, Secretary)

Carcinoma of Uterine Fundus—G. V. Brindley, Temple.
Selection of Patients for Roentgenological Examination of the Gastro-intestinal Tract—C. A. Stevenson, Temple.

Milam County Medical Society met October 10, at the Cameron Hospital, Cameron, with eleven members and five guests present. T. S. Barkley, president, presided, and the scientific program as given above was carried out.

The paper of Dr. Brindley was discussed by Eduard Rischar, W. R. Newton, Thomas L. Denson, and C. G. Swift.

The paper of Dr. Stevenson was discussed by T. S. Barkley, W. R. Newton and C. G. Brindley.

Other Proceedings.—The secretary read a communication from the State Medical Association secretary requesting the appointment of a committee on military affairs. It was voted on motion of C. G. Swift that the president appoint such committee and the following committee was appointed: T. E. Crump, chairman, C. G. Swift and T. L. Denson.

Roy G. Reed, director of the Milam County Health Unit, presented a plan for the establishment of a venereal disease clinic for Milam County with the use of government funds to pay for drugs and to pay two private physicians approximately $50 per month each to operate such clinic, the personnel of the clinic to be changed each six or twelve months.

C. G. Swift moved that the Society endorse the plan and coöperate with the health unit in establishing and operating the proposed venereal disease clinic, which motion carried.

Nolan-Fisher-Mitchell Counties Society

September 9, 1940

Sweetwater-Nolan County Health Unit and Its Functioning—George A. Gray, Sweetwater.

Nolan-Fisher-Mitchell Counties Medical Society met September 9, with ten members and two visitors present. T. D. Young, president, presided and the program as given above was carried out.

Following the presentation of Dr. Gray, the Society voted its approval of the health unit.

Tarrant County Society

September 17, 1940

(Reported by Craig Munter, Secretary)

Delayed Rupture of the Spleen with Hemangioma Coexistent: Case Report—R. G. Baker, Fort Worth.
Surgical Management of the Completely Severed Ureter—A. Keller Doss, Fort Worth.

Tarrant County Medical Society met September 17, in the Medical Arts Auditorium, Fort Worth, with sixty-seven members and six visitors present. The scientific program as given above was carried out.

The presentation of Dr. Baker was discussed by May Owen, R. J. White and George R. Enloe. Dr. Owen, in discussing the paper, showed colored lantern slides made by J. Franklin Campbell.

The paper of Dr. Doss was discussed by R. S. Mallard and Harold J. Shelley.

New Members.—Robert J. Jermstad, LaVerne Joseph Hawker, and Nolley Craft Farrington were elected to membership on application and introduced to the Society.

Other Proceedings.—Sim Hulsey, chairman of the clinic committee, discussed plans for the fall clinic, September 24, and urged all members to attend.

President Godley introduced Drs. M. A. Diamond and D. C. Cameron of the U. S. Public Health Service Hospital.

President Godley informed the Society of the death that date of Dr. D. M. Higgins of Gainesville. R. G. Baker, after praising Dr. Higgins as a long standing friend of the Society and calling attention to his regular attendance at district meetings moved that flowers be sent. The motion carried.

The attendance prize, a pen and pencil set, was won by W. P. Higgins.

Following adjournment a motion picture, "Hysterectomy," was shown through the courtesy of Mead Johnson & Company.

October 1, 1940

Tarrant County Medical Society met October 1, with fifty-seven members and two visitors present.

New Member.—Charles William Braselton, Jr., was elected to membership.

Complimentary remarks were made by various members of the Society concerning the clinic held September 24. On motion of W. G. Phillips, seconded by T. H. Thomason, it was voted that a letter of appreciation be written by the Secretary to Sim Hulsey, chairman of the clinic committee, commending the committee for an outstanding clinic.

H. L. Warwick, a long time practitioner of Fort Worth, was paid special honor by the Society. Speakers who described the life and praised the achievements of Dr. Warwick as a physician and scientist and his influence on the medical profession included Rex Howard, John M. Furman, Charles H. McCollum, S. J. Wilson, W. G. Phillips, R. H. Gough and L. H. Reeves. Dr. Warwick, responding, thanked the Society for the honor paid him. At the close of the meeting he was presented with an electric razor.

October 15, 1940

Neck Infections of Dental Origin—Claude Ward, Jr., Fort Worth.
Subdural Hematoma—Wayne Taylor, Fort Worth.

Tarrant County Medical Society met October 15, with fifty-seven members and two visitors present. L. O. Godley, president, presided and J. R. Cochran, program chairman, presented the scientific program as given above.

Claude Ward, Jr., pointed out that septic infections of the neck are usually secondary to infections of the mouth, nose or pharynx and, in many cases, infections of the teeth are the inciting cause. Vincent's spirochete is the predominating micro-organism found in these cases. Neoarsphenamine and sulfanilamide are the most helpful drugs. External incisions are not always necessary. Whenever possible all surgical procedure should be carried out under local anesthesia and patients should be hospitalized.

Wayne Taylor in discussing subdural hematoma stated that it follows both trivial and severe head injuries and occurs in about 10 per cent of all fatal injuries. The paper was illustrated with lantern slides.

The presentation of Dr. Ward was discussed by H. L. Warwick, Eugene V. Powell, J. Morris Horn, C. O. Terrell, Jr., and R. G. Baker.

The presentation of Dr. Taylor was discussed by W. O. Ott, J. W. Tottenham, Jr., and W. G. Phillips.

J. R. Cochran, chairman of the program committee, announced at the conclusion of the meeting that a motion picture, "Pneumonia," would be shown the evening of October 21 in the Medical Arts Auditorium through the courtesy of Lederle Laboratories, Inc.

The attendance prize, an electric razor, was won by L. D. Borough.

Walker-Madison Counties Society

September 10, 1940

Goiter—James A. Hill, Houston.
Heart Disease—B. F. Smith, Houston.

Walker-Madison Counties Medical Society held a joint dinner meeting with the Woman's Auxiliary to the Society, at the Wills Hotel, Madisonville, Texas, with twenty-five present.

Following the dinner the Auxiliary adjourned to the home of Mrs. J. B. Heath for a separate meeting.

Ray Back, Huntsville, president, presided over the

meeting of the County Medical Society, and the scientific program as given above was carried out.

Wharton-Jackson Counties Society

September 10, 1940

Wharton-Jackson Counties Medical Society met September 10, 1940, at the Nightingale Hospital, El Campo.

Van C. Tipton of the State Health Department, Austin, explained the plan of the county health unit to the Society, after which the Society voted its approval of the plan. The secretary was instructed to inform the county commissioners of the action taken since the state and federal governments will not cooperate with the county financially unless the county medical society votes its approval, it was stated.

October 7, 1940

Wharton-Jackson Counties Medical Society met October 7, at the Plaza Hotel, Wharton, with N. D. Buie, Marlin, president-elect of the State Medical Association, as guest speaker. Dr. Buie spoke on the subject, "Modern Medical Problems."

The possibility of merging Matagorda County and Fort Bend Counties Societies with the Wharton-Jackson Counties Society in order to form a larger and more practical unit was discussed.

Wichita County Society

October 8, 1940

(Reported by C. E. Mangum, Secretary)

A Case of Ruptured Uterus; Vaginal Hysterectomy—Theron H. Funk, Fort Worth.
Cataract Surgery; A Glimpse of India—William Webb, Fort Worth.

Wichita County Medical Society met October 8, 1940, at the Wichita Club, with forty members present. L. B. Holland, president, presided and the scientific program as given above was carried out.

New Member.—R. W. Manar was elected to membership.

Other Proceedings.—The Society approved the activities of the Red Cross on "Care of Expectant Mothers," as reported by T. L. Hyde of the executive committee.

President Holland announced the appointment of the following to the committee on military affairs: Q. B. Lee, chairman, G. T. Singleton, O. W. Wilson, and W. H. Ogden.

G. T. Singleton urged all members to execute and return the questionnaire on medical preparedness to the American Medical Association.

Northeast Texas District Society

October 8, 1940

(Reported by J. N. White, Secretary)

The Fifteenth (Northeast Texas) District Medical Society met October 8, at the Hotel McCartney, Texarkana. W. B. Brown, Mayor, gave the address of welcome.

The following scientific program was carried out:

Treatment of Diarrhea in Infancy and Childhood—Ben Andres, Longview.
(Discussed by C. E. Kitchens, Texarkana.)
Some Observations on Malaria and Its Treatment—J. F. McVeigh, Fort Worth.
(Discussed by Richard Granberry, Marshall.)
Acute Abdomen—William Hibbitts, Texarkana.
(Discussed by Robert Y. Lacy, Pittsburg.)
Early Diagnosis of Pregnancy—C. R. Hannah, Dallas.
(Discussed by R. C. Cross, Texarkana.)
The Use of Sulfanilamide Derivatives in Acute Infections—Walter G. Reddick, Dallas.
(Discussed by Don J. Jenkins, Daingerfield.)
Laryngo-Tracheo-Bronchitis—A. W. Roberts, Texarkana.
(Discussed by V. R. Hurst, Longview.)
Practical Points in the Treatment of Gonorrhea in the Male—R. K. Womack, Longview.
(Discussed by William A. Taylor, Mt. Pleasant.)

The program was carried out in detail as planned, each essayist being present and presenting his paper on scheduled time. The discussions were free and frank. The general consensus was that the meeting was one of the best the District Society had ever held.

At noon, members of the Society were joined by members of the Woman's Auxiliary for luncheon. On this occasion, Dr. Holman Taylor, Fort Worth, Secretary of the State Medical Association, was the guest speaker. Dr. Taylor's subject was medical preparedness.

Dr. Preston Hunt, Texarkana, president of the State Medical Association, and Mrs. William Hibbitts, Texarkana, president of the Auxiliary to the State Medical Association, also made brief addresses.

At the annual business meeting all officers were re-elected as follows: President, H. M. Ragland, Gilmer; vice-president, J. K. Bates, Pittsburg, and secretary-treasurer, J. N. White, Texarkana.

Longview was selected as the place of meeting in 1941.

CHANGES OF ADDRESS

Dr. J. T. Armstrong, from Chicago to New York City.

Dr. John V. Blake, Jr., from Floresville to Fort Sam Houston.

Dr. R. Louis Cope, from New Orleans, Louisiana, to El Dorado, Arkansas.

Dr. Thomas N. Dyson, from Austin to Kyle.

Dr. C. T. Dubuy, from Tulia to Camp Hulen, Palacios.

Dr. Charles W. Evans, Jr., from Del Rio to Fastrill.

Dr. W. A. Grant, from San Antonio to Terrell.

Dr. Shirley S. Bowen, from Galveston to Houston.

Dr. Ralph H. Homan, from El Paso, to U. S. Naval Hospital, Parris Island, South Carolina.

Dr. C. E. Harrington, from Sulphur Bluff to Dallas.

Dr. M. H. Jensen, from San Antonio to Winters.

Dr. Arch C. Koontz, from Nixon to San Antonio.

Dr. James L. McCrory, from Longview to St. Louis, Missouri.

Dr. A. S. McGee, from San Angelo to San Antonio.

Dr. John S. Peek, from Brownsville to Naval Air Station, Pensacola, Florida.

Dr. W. F. Pickett, from Tyler to Dallas.

Dr. Emil P. Reed, from Brownsville to Fort Sam Houston.

Dr. A. W. Robbins, from San Antonio to Minneapolis, Minnesota.

Dr. John C. Rucker, from Dallas to Fort Sam Houston.

Dr. Oliver C. Seastrunk, from Franklin to Lufkin.

Dr. P. G. Secrest, Jr., from Houston to Boston, Massachusetts.

Dr. C. G. Yarbrough, Jr., from Midland to San Antonio.

AUXILIARY NOTES

Officers of the Woman's Auxiliary to the State Medical Association of Texas; President, Mrs. William Hibbitts, Texarkana; honorary life president, Mrs. A. C. Scott, Sr., Temple; president-elect, Mrs. S. F. Harrington, Dallas; first vice-president, Mrs. H. Leslie Moore, Dallas; second vice-president, Mrs. A. E. Moon, Temple; third vice-president, Mrs. A. B. Pumphrey, Fort Worth; fourth vice-president, Mrs. Joe B. Foster, Houston; recording secretary, Mrs. Walter A. Minsch, Kerrville; publicity secretary, Mrs. W. F. Armstrong, Fort Worth; treasurer, Mrs. J. Frank Clark, Abilene; parliamentarian, Mrs. J. W. Tottenham, Brownwood; and corresponding secretary, Mrs. Ralph Cross, Texarkana.

AUXILIARY NEWS

Bowie-Miller Counties Auxiliary honored Mrs. Joe E. Tyson, Texarkana, president, with a coffee at the home of Mrs. L. H. Lanier, Texarkana, with Mrs. J. T. Robison, Mrs. T. F. Kittrell, Dr. Frances Spinka,

and Mrs. N. B. Daniel as co-hostesses with Mrs. Lanier.

Mrs. Tyson directed a business session at which plans were made for the presentation of Dr. W. W. Bauer, director of the Bureau of Health and Education of the American Medical Association, and assistant editor of *Hygeia*, at the meeting of the Fifteenth District Medical Society and Auxiliary in Texarkana, October 8.

Yearbooks were distributed and Mrs. William Hibbitts, Texarkana, was introduced as the new president of the State Auxiliary.

Mrs. C. H. Frank, a new member, was introduced.

The Auxiliary reports with sorrow the death of Mary Jean Roberts, the daughter of Dr. and Mrs. A. W. Roberts, Texarkana, on September 15.

Brazos-Robertson Counties Auxiliary met October 15, at the home of Mrs. T. E. Dodd in Bryan, with eleven members and one guest present. Mrs. W. M. Boguski, Hearne, presided.

Programs and plans for the coming year were discussed.

Mrs. L. O. Wilkerson was in charge of a group of games which comprised the program for the evening. At the conclusion of the meeting, members were joined by their husbands for refreshments. Assisting Mrs. Dodd as hostesses were Mesdames W. B. Cline, S. C. Richardson and S. B. Slaughter.—Mrs. T. A. Searcy.

Cherokee County Auxiliary met September 24, at the Doctors Home at the State Hospital, Rusk, with Mesdames Lawrence Smith and E. W. Burnett as hostesses. A delicious supper was served to fourteen members and one visitor, after which a short business meeting was held and a program based on material in *Hygeia* was enjoyed.

The program consisted of the following features: (1) "Chemical Capsules," Mrs. R. C. Rowell; (2) Limerick, Mrs. Lawrence Smith; (3) "Experiences in Granny Medicine," everybody, and (4) Catchy Quiz. The limerick of Mrs. Smith follows:

There was a young lady named Be—a
Who died of a quack panacea.
If she'd had common sense
And not been so dense,
She now would be reading *Hygeia*.

The quiz questions all of which answers are in *Hygeia* were:

(1) What famous woman had a snake for a pet?
(2) Who instituted the first health cult?
(3) Who's father was born after his mother was dead by what was perhaps the first cesarian operation on record?
(4) What member of a family famous in the science of medicine became so well known to this generation that most school children know her name? Or what it stands for?
(5) What magazine should be in every home?

Childress - Collingsworth - Hall Counties Auxiliary met October 15, with members of the Childress-Collingsworth-Hall Counties Medical Society for dinner at the Hotel Childress. After the dinner each group met separately for a business session.

Mrs. J. H. Jernigan, president, presided at the Auxiliary business session. The following committee chairmen were appointed for the coming year and their duties discussed: Hygeia, Mrs. E. W. Moss, Wellington; Wagner Health Bill, Mrs. J. W. Harper, Wellington; legislation, Mrs. E. W. Jones, Wellington; publicity secretary, Mrs. S. H. Townsend, Childress; physical examinations, Mrs. Charles B. Jones, Wellington; George Plunkett Red scholarship memorial and student loan funds, Mrs. J. A. Odom, Memphis, public relations, Mrs. R. E. Clark, Memphis.

The Auxiliary voted to sponsor an essay contest in all high schools in the three counties on the subject, "Increasing the Span of Life," the contest being sponsored by the State Auxiliary and several worth while prizes being offered.

At the conclusion of the program, the meeting was adjourned for a social hour.—Mrs. S. H. Townsend.

Dallas County Auxiliary held an informal coffee October 2, 1940, at the Dallas Country Club, honoring Mrs. Ramsay H. Moore, president of the Auxiliary and the official board. The board is composed of Mrs. Ramsay H. Moore, president; Mrs. H. Frank Carman, president-elect; Mrs. B. J. Berger, first vice-president; Mrs. James T. Montgomery, second vice-president; Mrs. E. M. Dunstan, third vice-president; Mrs. John V. Goode, recording secretary; Mrs. John E. Ashby, corresponding secretary; Mrs. C. O. Patterson, treasurer; Mrs. W. B. Carrell, parliamentarian; Mrs. Robert L. Moore, publicity; and Mrs. U. P. Hackney, historian. Mesdames H. Frank Carman and L. S. Thompson presided at the service.

Dallas County Auxiliiary has been active during the past summer assisting the Red Cross. A request for help was responded to by 50 per cent of the members of the Auxiliary. One full class and another half class of wives of doctors took the summer course in bandage rolling and in addition made numerous articles of clothing. The Auxiliary also contributed $50 to the Red Cross fund.

Auxiliary members taught a six weeks' course in home hygiene. The classes were full and enthusiastic and both teachers and students benefited.

The Auxiliary will sponsor in conjunction with the Dallas County Medical Society, an educational medical booth at the State Fair. The exhibit material is being sent by the American Medical Association and the booth will be in charge of the Hygeia committee of the Auxiliary.—Mrs. R. L. Moore.

Harris County Auxiliary officers honored new members of the Auxiliary with a tea, September 30, at the River Oaks Country Club, Houston. The new members are Mesdames Enga M. Arnold, Ralph Bowen, F. Keith Bradford, Arthur Burns, Frank Cone, Haydn H. Cutler, F. V. Grunbaum, J. Wade Harris, Nelson W. Karbach, Reuben L. Larsen, C. F. Montgomery, A. P. Overgaard, J. L. Patteson, Robert C. L. Robertson, G. E. Rohrer, Jr., E. O. Strassmann, J. Roy Theriot, Jr., W. B. Thorning, Jr., C. Gary Turner, D. J. Wible, and Lynn Jarr of Houston; Mesdames W. H. Bennett, J. E. McFarling and J. W. Sandlin of Humble; Mrs. Stanley G. Humphrey of Baytown; Mrs. C. H. Langford of Goose Creek; Mrs. H. K. McWilliams of Waller, and Mrs. A. E. C. Pope of Crosby.

Hostesses for the day were Mesdames Clyde M. Warner, H. W. Cummings, Jr., C. Q. Davis, George W. Waldron, Thomas J. Vanzant, H. L. Alexander, J. N. Messer, Seward H. Wills and C. A. Calhoun.

Henderson County Auxiliary held its first meeting of the fall September 10, at Athens, with Mrs. R. H. Hodge presiding. Routine business was attended to.

Mrs. J. K. Webster, Athens, council woman of the Eleventh District, gave an interesting report of the meeting of the Executive Board of the State Auxiliary, which was recently held in Fort Worth.

Roll call responses were current medical topics of interest given by each member present.

The yearbooks, which were prepared by Mrs. W. R. Love, were distributed.

The meeting was closed with a social hour during which the hostess served a salad course.

Jefferson County Auxiliary held its first fall meeting with a luncheon at the Country Club, Beaumont, October 2. Mrs. J. T. Young, Port Arthur, presided.

Mrs. W. B. Wallace talked on current events.—Mrs. M. E. Suehs.

Johnson County Auxiliary met October 9, at the home of Mrs. Tolbert Yater, Cleburne, for a luncheon, with Mrs. Yater and Mrs. T. C. Honea as hostesses.

Mrs. S. H. Watson, Waxahachie, past president of the State Auxiliary, was the guest speaker. Her subject was "Ethics for Doctors' Wives."

Other guests at the luncheon were Mrs. A. B. Pumphrey, third vice-president of the State Auxiliary; Mrs. W. G. Phillips, past president of the Thirteenth District Auxiliary, and Mrs. E. Estes, Waxahachie.

Kerr-Kendall-Gillespie-Bandera Counties Auxiliary met October 4, in the home of Mrs. V. Keidel, Fredericksburg, with twenty-four members and one guest for luncheon.

Mrs. F. B. Brewer, Legion, and Mrs. D. R. Knapp and Mrs. D. E. Packard, Kerrville, were introduced as new members.

Attractive yearbooks were presented and a preview of the year's work was presented by the president.

Mr. J. D. Jackson reported a conference with the superintendent of the Kerrville public schools concerning lunches to be given underprivileged children by the Auxiliary. Her plans were submitted for consideration and will be acted upon at the next meeting.

The Auxiliary voted to sponsor the state health essay contest in Gillespie County schools and to give prizes for the winning essays.—Adah L. Peden.

Lamar County Auxiliary met October 3 at the home of Mrs. M. A. Walker, Sr., Paris. Routine business was discussed and a new member, Mrs. W. L. Kelly, introduced.

The next meeting of the Auxiliary will be a luncheon at the Golf Club, November 7, at which time Mrs. William Hibbitts, State President, will be guest speaker.

Lampasas-Burnet-Llano Counties Auxiliary honored the Lampasas-Burnet-Llano Counties Medical Society with a fish fry at the Administration Building, Buchanan Dam, October 10, for the first meeting of the year.

After the supper, Mrs. T. D. Vaughan, president of the Auxiliary, presided at a business meeting and gave a report of the Executive Board meeting of the State Auxiliary, which she attended as council woman of the Seventh District.

Reports were received from representatives of the various counties in the Auxiliary as follows: Mrs. J. A. Shepperd, Burnet, as sponsor of war relief and in charge of compulsory free examinations in schools; Mrs. Scott Allen, Burnet, sponsor of war relief; Mrs. T. D. Vaughan, Bertram, in charge of a county welfare project; Mrs. Charles Faires, as chairman of the county project sewing unit at Bertram; Mrs. W. W. Brooks, chairman of the surgical supplies for county welfare work at Lampasas.

The Auxiliary voted to meet four times each year, holding meetings at Lampasas, Burnet, Llano, and Bertram, respectively.—Mrs. R. W. McFarlin.

Nolan-Fisher-Mitchell Counties Auxiliary was organized September 9, at a meting in the Bluebonnet Hotel, Sweetwater, under the direction of Mrs. J. E. Hogan, Big Spring, council woman of the Second District. Monthly meetings will be held at Sweetwater.

Officers elected to serve the Auxiliary for the first year were: President, Mrs. J. W. Young, Roscoe; vice-president, Mrs. J. K. Richardson, Sweetwater; secretary-treasurer, Mrs. J. B. Stubbs, Sweetwater; and corresponding secretary, Mrs. R. O. Peters, Sweetwater.

Tom Green Eight County Auxiliary met October 7, in the Massie Clubhouse, San Angelo, with members of the City Federated Clubs, Parent-Teachers Associations and interested citizens as guests. Mrs. W. Grady Mitchell, president, presided.

Dr. Carl A. Kunath, guest speaker, spoke on the subject, "The Importance of the Periodic Health Examination in the Control of Cancer." Dr. Kunath stressed that cancer is curable when treated in its early stages and is always fatal if left untreated.

During a business session Mrs. R. M. Finks reported on possible projects for the year.

After the program a social hour was enjoyed, with Mesdames W. L. Bush, J. S. Hixson and Aubrey L. Lewis as hostesses.—Mrs. Lewis K. Tester.

Travis County Auxiliary met October 15, at the Home Economics Tea House, Austin, with Mrs. R. T. Wilson, president, presiding.

Dr. W. R. Houston, president of the Travis County Medical Society, was guest speaker.

Mrs. Dalton Richardson is chairman of the committee in charge of the annual essay contest sponsored by the State Auxiliary in which school children up to the tenth grade take part. A local prize will be given in addition to the State Auxiliary prize.

Mrs. T. D. Vaughan, Bertram, council woman of the Seventh District, attended the meeting and poured tea after the business session and program.

Washington County Auxiliary held its first meeting of the fall, September 30, at the St. Anthony Hotel, Brenham. Mrs. C. E. Southern, president, presided.

Routine business was conducted and plans and programs for the coming year were discussed.

Mrs. S. E. Stafford discussed rules and order of procedure in club meetings.

Mrs. A. H. Sinclair read a paper on "The American Medical Association Program."—Mrs. A. C. Miller.

The Northeast Texas (Fifteenth) District Auxiliary met October 8, at the Hotel McCartney, Texarkana, with Mrs. T. A. Reitz, Pittsburg, presiding.

Speakers included Mrs. William Hibbitts, Texarkana, president of the State Auxiliary; Mrs. L. H. Lanier, Texarkana, president-elect of the Bowie-Miller Auxiliary, and Mrs. M. J. Johnson, Pittsburg, vice-president of the District Auxiliary.

Officers elected at the business meeting were: President, Mrs. W. S. Caldwell, Kilgore; vice-president, Mrs. M. J. Johnson, Pittsburg, and secretary-treasurer, Mrs. Ralph Cross, Texarkana.

The registration committee for the meeting was composed of Mesdames L. H. Lanier, T. F. Kittrell, N. B. Daniel and C. H. Frank.

Members of the Auxiliary joined members of the District Medical Society for luncheon at the Hotel McCartney. After the luncheon visitors were entertained with a drive about the city, the concluding entertainment being a seated tea at the home of Mrs. William Hibbitts.

The entertainment committee for the meeting included Mrs. Roy Baskett, chairman, Mesdames Harry Murry, H. E. Longino, Ralph Cross and Louis P. Good, all of Texarkana.

BOOK NOTES

[1]**Modern Dermatology and Syphilology.** By S. William Becker, M. D. Associate Professor of Dermatology and Syphilology, Kuppenheimer Foundation, University of Chicago, and Maximillian E. Obeymayer, M. D. Assistant Professor of Dermatology and Syphilology, Kuppenheimer Foundation, University of Chicago. Cloth, 847 pages. 461 illustrations in text, 32 full color plates. Price, $12.00. J. B. Lippincott Company, Philadelphia and London, 1940.

In this volume the authors have accomplished in admirable fashion, their purpose, as set forth in the preface, *e. g.*, departure from the usual encyclopedic style; allotment of space in accordance with the im-

[1]Reviewed by Earl L. Loftis, M. D., Dallas, Texas.

portance of the disease in question; and presentation of material in lecture form. The informal general remarks on the subject to be discussed, introduced under the title "Orientation" at the beginning of each chapter, adds much to the interest of the reader. The classification of material reflects a modern and open-minded viewpoint of the part of the authors; their informal style makes easy reading. The illustrations are excellent throughout the book; those in color are exceptionally good. All the newer concepts, methods, and therapeutic procedures of proved value are incorporated in the text; the rare and uncommon diseases have been omitted.

The discussion on eczema (contact dermatitis) is clear and includes a list of common irritants, the proper concentrations for patch testing, and a description of the manner in which patch testing should be done. In the chapter on drug eruptions, the authors have incorporated a list of drugs and the types of dermatoses caused by them, also a list of the types of the dermatoses and the drugs which cause them. The authors believe that neurodermatitis, the neurodermatoses and most cases of pruritis are functional in origin, and report success with that type of approach. The chapter on the dermatomycoses is comprehensive, each of the common fungus diseases being discussed in detail. Tables showing the irritants likely to be found in various industries are incorporated in the chapter on occupational dermatoses, with the proper dilutions that should be used in patch testing. There are 186 pages on syphilis in which every phase of the subject is ably discussed.

While this book is intended primarily for the practitioner and medical student, the specialist will find it very interesting and valuable. The discussions are brief and to the point but quite adequate. The modern trends in dermatology and the individuality of the authors is reflected in a very attractive manner.

The reviewer considers this text a valuable contribution to recent medical literature.

[2]**Illustrations of Surgical Treatment, Instruments and Appliances.** By Eric L. Farquharson, M. D., F. R. C. S. E. Tutor in Clinical Surgery, Royal Infirmary of Edinburgh, with a Foreword by Sir John Fraser, M. C., M. D., Ch. M., F. R. C. S. E. Regius Professor of Clinical Surgery, University of Edinburgh. Cloth, 331 pages. Price, $6.50. A William Wood Book. The Williams and Wilkins Company, Baltimore, 1939.

Mr. Farquharson, in typical British conservatism, has most commendably fulfilled his purpose of illustrating by numerous photographs practical methods of surgical treatment rarely covered by textbooks of general surgery.

The presentation of the care of fractures is particularly instructive. The author has shown alternative methods of treatment in most cases, so that the reader can choose that method best suited to his abilities. The Bohler methods shown are seen in a more rational light. These methods give the very fundamentals of fracture treatment in a quick and understandable manner. For practitioners as well as students it is a very fine handbook.

In some places in this country several of his methods as illustrated have been superseded. In Part I the author advocates the use of continuous intravenous infusions. That method is seldom used in this country. At any rate, it is not often necessary to sacrifice a vein in accomplishing this type of therapy. Likewise, in many places the meticulous blood matchings tests have been disposed of, and group 4 blood is being used in all cases.

The treatment of surgical tuberculosis is truly English. In America the long period of hospitalization cannot be carried out, largely because of economic strains, and it has been found at a recent symposium that the surgical treatment of this disease is probably more successful than the conservative treatment.

Finally, Part V gives a bird's-eye-view of the necessary armamentarium for surgical procedures. It should facilitate the student in acquainting himself with the operating room.

[3]**Elmer and Rose' Physical Diagnosis.** Revised by Harry Walker, M. D., F. A. C. P. Associate Professor of Medicine, Medical College of Virginia, Richmond, Virginia. Cloth, 765 pages. Price, $8.75. 295 illustrations. Eighth edition. The C. V. Mosby Company, St. Louis, 1940.

The new edition maintains certain of the better features of the earlier edition and shows some changes which will add to its value. No field of physical diagnosis has been neglected, but it is doubtful if the chapters on special diagnostic procedures have any place in a book of this type or are up to the general standards of the book as a whole. Also the illustrative plates are disappointing, lacking clearness of detail and modern application.

The chapters on the respiratory and circulatory systems are particularly good in that they are well organized and show careful preparation. The diagnostic charts in this section deserve mention, because they show careful selection and convey accurately what they are intended to illustrate.

The chapter on the neuropsychiatric examination has been added to the new edition and such an addition has manifest advantages and should add to the popularity of this well known text. It was prepared by Dr. James Asa Shield, Associate Professor of Neuropsychiatry, Medical College of Virginia.

[4]**Simplified Diabetic Manual.** With 163 International Recipes (American, Jewish, French, German, Italian, Armenian, etc.). By Abraham Rudy, M. D. Associate Physician and Chief of the Diabetic Clinic, Beth Israel Hospital, Boston; Instructor in Medicine, Tufts College Medical School; Consultant in Diabetes, Jewish Memorial Hospital, Roxbury, Mass., and Jewish Tuberculosis Sanatorium, Rutland, Mass. Cloth, 175 pages. Price, $2.00. M. Barrows & Company, Incorporated, New York, 1940.

"Although the average diabetic is now able to live out a normal life span and to carry out a useful life, the death rate in diabetes is still high." In making the task of lowering this death rate simpler for both patient and physician, Dr. Rudy's book is a valuable contribution.

Starting with a clear and simple outline of the facts known about the utilization of food by the human body, of what diabetes is, and of its manifestations and of the method of treatment, Dr. Rudy brings his book up to date by discussing some of the newer aspects of the disease. He stresses the desirability of taking enough insulin to maintain a carbohydrate intake relatively high in relation to preinsulin high fat diets.

A chapter is devoted to vitamins. He tells what they are, classifies them, and tells of their food sources. There is a brief resume of the manifestations of vitamin deficiency of all known types.

Since insulin has made possible the attainment of a marriageable age by more diabetics and the birth of more potential diabetics, it is well that the patient should understand both the relationship of heredity to the disease and the effect of diabetes on pregnancy. These subjects are adequately covered.

[2]Reviewed by David Cameron, M. D., El Paso, Texas.

[3]Reviewed by William L. Powers, M. D., Wichita Falls, Texas.

[4]Reviewed by W. B. Whiting, M. D., Wichita Falls, Texas.

In discussing the complications of the disease the author is to be commended on having devoted a complete chapter to the importance of diabetes in the etiology of coronary disease.

The technic of the administration of insulin, the dangers, and local reactions of giving too much or too little are discussed. The proper stress is placed upon the importance of avoiding insulin shock in the presence of cardiovascular disease.

The explanation of principles underlying diabetic diet is clear and complete. There are approximately 100 pages of recipes and suggestions which would intrigue the interest of any diabetic patient.

[5]**Getting Ready to Be a Mother.** By Carolyn Conant Van Blarcom. Revised by Hazel Corbin, General Director Maternity Center Association. Cloth, 190 pages. Fourth Edition. Price, $2.50. The Macmillan Company, New York, 1940.

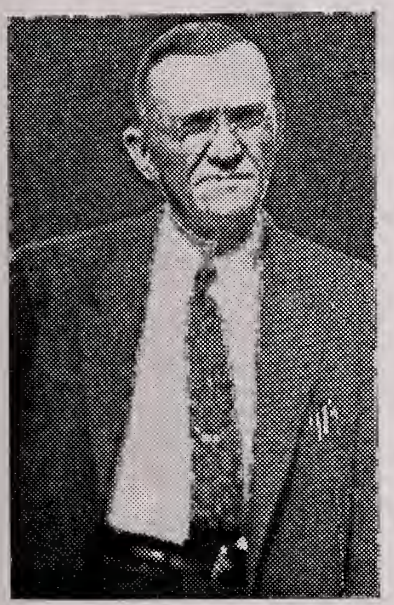
This book may be readily recommended to the well-educated, expectant mother. It is well written and through the courtesy of Dr. Robert L. Dickinson, has many good illustrations, especially the photographs of the series of the life-size plaster sculptures showing the baby's development from conception to birth and the return of the uterus to normal size and position after birth. Chapter III on Prenatal Care, and Chapter VIII, which deals with the puerperium, are excellent.

The book is rather lengthy and seems to be padded in numerous chapters; in the reviewer's opinion it could be condensed and greatly reduced in cost.

DEATHS

Dr. Henry L. Applewhite of Archer City, Texas, died September 6, 1940, in an Olney hospital, following an acute illness.

Dr. Applewhite was born July 1, 1887, at Pine Bluff, Mississippi, the son of Mr. and Mrs. J. J. Applewhite. During his infancy he moved with his parents to Hamilton County, Texas, where he was reared. His academic education was obtained in Southern Methodist University, Dallas, from which he was graduated with a B. A. degree. His medical education was received in the Southern Methodist University Medical Department, Dallas, from which he was graduated in 1914. After his graduation he served an internship in St. Paul's Hospital, Dallas. He began the practice of medicine at Lewisville, Texas. He had later lived and practiced at Cranfill's Gap, Bosque County, and Hamilton, Texas, from which latter place he moved to Archer City in 1926, which was his home for the remainder of his professional life.



DR. HENRY L. APPLEWHITE

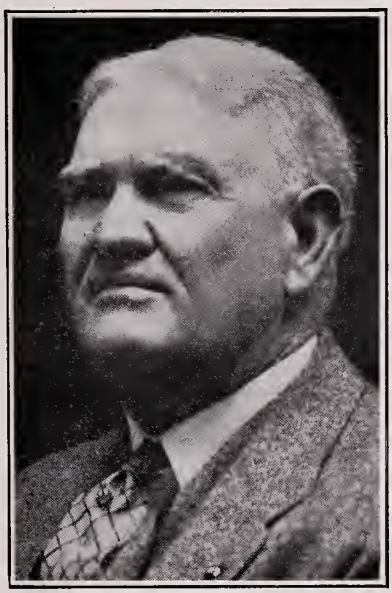
Dr. Applewhite had been a member of the State Medical Association and American Medical Association through the county medical societies of his various places of residence, and was in good standing at the time of his death. Dr. Applewhite was a country practitioner through choice. He was fond of rural life, liked hunting and fishing, and loved country people. He was genuinely beloved by the community he served. He was a member of the Christian Church, a Mason, and a member of the D. O. A. fraternity and the Woodmen of the World.

Dr. Applewhite is survived by his wife, the former Miss Willodeen M. Medlock of Lewisville, Texas, to whom he was married in 1916. He is also survived by two daughters, Misses Geraldine and Donna Sue Applewhite, and one sister, Mrs. Ben West.

Dr. D. M. Higgins of Gainesville, Texas, died September 17, 1940, in a Gainesville hospital, of coronary thrombosis.

Dr. Higgins was born June 27, 1868, in Tennessee. His medical education was obtained in the Hospital College of Medicine, Louisville, Kentucky, from which he was graduated in 1893. He began the practice of medicine in Rosston, Texas, where he remained for two years. He then removed to Gainesville, where he had been in active practice for forty-five years.

Dr. Higgins was a member throughout his professional life of the State Medical Association and American Medical Association through the Cooke County Medical Society. He was a charter member of the last named organization, which he had served in every official capacity and many times as delegate to State Association meetings. He was also a member of the North Texas District Medical Society, of which he was a past president. Throughout his professional life he was keenly interested in the affairs of organized medicine and gave generously of his time and ability in working for its objectives. He was a member of the Baptist Church, a Knights Templar Mason and a member of the Shrine. In addition to a busy professional life, he was a recognized civic leader in his community which he had served as a member of the city council, the chamber of commerce and its civic league. He was a member of the Rowanis Country Club, of which he was a past president, and of the Rotary. Dr. Higgins was widely known and highly respected by his medical confreres in North Texas and by the large clientele he had faithfully served during almost a half century.



DR. D. M. HIGGINS

Dr. Higgins was married twice. His first wife died

[5]Reviewed by D. D. Wall, M. D., San Angelo, Texas.

in 1906. He is survived by his second wife; one daughter, Mrs. Jack Bringman, Washington, D. C., and a sister, Miss Cora Higgins, Washington, D. C.

Dr. **John Claude Hull** of Port Arthur, Texas, died September 19, 1940, of a gunshot wound.

Dr. Hull was born February 10, 1903, in Tyler, Texas, the son of Mr. and Mrs. John Cordell Hull.

DR. JOHN CLAUDE HULL

His academic education was received in the public schools of San Antonio and the University of Texas, Austin. His medical education was obtained in the Tulane University School of Medicine, New Orleans, from which he was graduated in 1926. After his graduation he served internships in the Cincinnati General Hospital, Cincinnati, Ohio, and the Santa Rosa Infirmary, San Antonio, Texas. He had practiced medicine at San Antonio, Oklahoma City, and Port Arthur, nearly all of his professional life being spent in San Antonio.

Dr. Hull had been a member for several years of the State Medical Association and the American Medical Association through the Bexar County Medical Society. During the past several years he had served on the surgical staff of the Robert B. Green Hospital in San Antonio and was assistant health officer of Bexar County. He was a member of the Sigma Alpha Epsilon and Phi Chi fraternities. He was a member of the Baptist Church and a Mason. Dr. Hull had a genial, winning personality and made hosts of friends wherever he lived. He was charitable, conscientious in his work, and capable. His untimely death cut short a life of possible great usefulness.

Dr. Hull is survived by his wife, the former Miss Edith Caraway, to whom he was married June 24, 1926, in Shreveport, Louisiana. He is also survived by a son, William Oliver Hull, and two brothers, Dr. A. O. Hull and T. P. Hull, San Antonio.

Dr. **J. W. Benton** of Peniel, Texas, died September 29, 1940, at his home.

Dr. Benton was born August 14, 1861, in Tennessee, in which state he was reared. He came to Texas as a young man and taught school for nine years. His medical education was received in the Kentucky School of Medicine from which he was graduated. He began the practice of medicine in 1895 and was in active practice until a few years ago. He located in Peniel in 1905, which was his home for the remainder of his life.

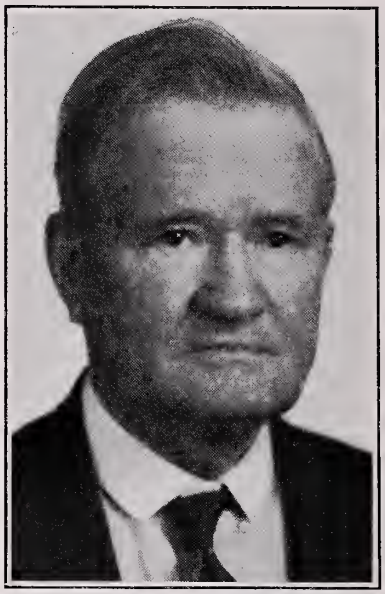
Dr. Benton was for several years a member of the Hunt County Medical Society, State Medical Association, and American Medical Association. In 1935, he was elected an honorary member of the Hunt-Rockwall-Rains County Medical Society and of the State Medical Association, which membership status was continued until his death.

Dr. Benton served for five years as superintendent of the Peniel Orphans Home. He was especially fond of children and after that institution was closed he kept several of the homeless children in his own home for some time. Shortly after his location in Peniel he was elected to the board of the Nazarene College there. He was a member of the Church of the Nazarene. He was a highly respected physician and citizen.

Dr. Benton is survived by one daughter, Mrs. Elsie Runyon, Peniel, and two sons, Walton Benton, Peniel, and Tom Benton, California.

Dr. H. D. Vaughter of Byers, Texas, died suddenly September 10, 1940, of cerebral hemorrhage, shortly after an address of welcome to public school teachers of Byers, delivered at a civic reception for them.

Dr. Vaughter was born August 3, 1867, in Carnsville, Georgia, the son of S. H. and Elizabeth Vaughter.



DR. H. D. VAUGHTER

His preliminary education was received in the public schools at Pilot Point, Texas, and his medical education in the Memphis Hospital Medical College, Memphis, Tennessee, from which he was graduated in 1903. During his years of practice he had taken postgraduate work at various clinical centers. He practiced medicine for seven years at Spring Creek, Texas, two years in Graford, one year in Mineral Wells, seven years in Megargel, and for the past twenty-three years in Byers.

Dr. Vaughter was a member for many years of the State Medical Association of Texas and the American Medical Association through the county medical societies of his various places of residence, and was in good standing at the time of his death. He was an able physician and a civic and religious leader in his community. He was a member of the Methodist Church, which institution he was serving as a steward and as superintendent of the Sunday School at the time of his death. He was a member of the Masonic order, being a Past Master of his local lodge. He had given generously of his time and talents to his community in every worth while enterprise and will be genuinely missed.

Dr. Vaughter is survived by his wife, the former Miss Ada Gordon Hall, to whom he was married in Ada, Oklahoma, in 1901. He is also survived by four sons, H. D. Vaughter, Jr., Byers, Texas; S. H. Vaughter, Rochester, Texas; J. G. Vaughter, Haskell, Texas; and J. V. Vaughter, Muskogee, Oklahoma; two daughters, Mrs. Hershel Miller, Grand Falls, Texas; and Mary Nelda Vaughter, Spur, Texas; one brother, T. H. Vaughter, Oklahoma City; and two sisters, Mrs. W. S. Smith, Houston, Texas, and Mrs. W. E. Davis, Riverland, Texas.

Texas State Journal of Medicine

EDITORIAL OFFICES: 1404 W. El Paso Street, Fort Worth, Texas
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Vol. XXXVI **December, 1940** **No. 8**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

Medical Service for Our Military Training Program must, as always heretofore, be furnished by the medical profession as a whole. No such rapid expansion of the Army as is involved in the present emergency could possibly be cared for by its regular personnel. There will be approximately 1,400,000 men in the service as soon as mobilization is complete. How long the number will remain at this point, no one knows. It may be reduced, or greatly increased, almost any time. Of this number, 400,000 will serve with the Regular Army, 200,000 with the National Guard, and 800,000 with the Selective Service set up, whatever that may be. In this connection, it will be remembered that, during the other emergency, the latter group was incorporated into divisions to the extent necessary. That will probably happen this time when the men have been sufficiently trained to warrant the formation of such units. However, that is not the problem at the moment.

It has been estimated that 6.5 doctors for each 1,000 men in the service will be required to begin with. That means that there will be at least 9,100 doctors in the service. There are 1,200 physicians in the Regular Army, and 1,100 in the National Guard. That leaves a deficit of 6,800 physicians to be supplied by the Reserve Corps. At the present time there are only 1,500 physicians holding commission in the Reserve, which would seem to leave a net shortage of 5,300 doctors. We must furnish that number right away.

It is because of this condition, and the situation as it may soon develop from this starting point, that the American Medical Association has taken the matter in hand, and called to its help organized medicine and the individual physician throughout the country.

Hence the necessity for the heretofore much discussed medical preparedness questionnaire, and hence the necessity for county society and state committees on Military Affairs. It is hoped that through the organization already set up in this connection, the requirements of the government may be met without a great deal of confusion and with a minimum of imposition on patriotic physicians. We believe this can be done if we can begin with a proper classification of physicians in the county medical society. If the Military Affairs Committee of a county medical society can have at hand a list of the doctors in the county who are willing to serve, and who prefer to serve in specified capacities, and who can be spared, the rest will be relatively easy. A number of our county societies have already begun to do this. For instance, we have been furnished with a list of the physicians of Jefferson county, compiled by the Military Affairs Committee of the Jefferson County Medical Society, from which list the local committee will have little difficulty in selecting the number of physicians which they may be called upon to furnish for any military service. It would be fine if all of the county societies would do the same thing, and right away.

As we have before remarked in these columns, furnishing medical service for our

training program presents quite a difficult situation, one which would not exist were we actually at war. There is little glamour, and naturally less feeling of patriotism in a purely training program, whereas the sacrifice the doctor has to make to render the service in either connection is the same. The complications thus presented are well understood, we are sure. With reference to this phase of the problem, a circular letter from the Medical Department of the Army, just received, makes some pertinent observations. The circular will be published in an early number of *The Journal of the American Medical Association,* but in the meantime we would like to quote just two paragraphs:

"Under the present Joint Resolution passed by the 76th Congress, the President is authorized to order into the active military service of the United States for a period of twelve consecutive months each, any or all members of any Reserve component of the Army of the United States, with or without their consent, to such extent and in such manner as he may deem necessary for the strengthening of the National Defense. If a sufficient number of officers do not indicate their availability for this service, Reserve officers must necessarily be ordered to duty without their consent. Additional appointments among physicians of draft age will increase the strength of the Medical Corps Reserve. However, it is apparent that a very large percentage of these officers must participate actively in the present program for preparing a portion of the country's man power for National Defense.

"In establishing rosters from which officers will be ordered to duty, Corps Area Commanders and Chiefs of Branches have been instructed to circularize all Reserve officers under their assignment jurisdiction to permit them to state the amount of deferment desired and the cogent, pertinent reasons for such deferment in the event that they are not immediately available for military service. This action has been taken in view of the fact that a national emergency has not been declared by the Congress, nor has mobilization been ordered. The medical service of a training program, although essential to national preparedness, possesses none of the glamour of the same service during actual military operations; it is, however, equally important. Indeed, military training may, through the thoroughness of its preparation for war, materially assist in preventing the necessity of participation in military operations. It is realized, of course, that all officers would express their immediate availability in the event of war; many, however, feel that their services are not of national importance at the present time."

The Scientific Program for the Next Annual Session is in process of compilation right now. We are advised by the officers of several of the scientific sections that offers of contributions are coming in rapidly; that very soon there won't be any vacancies. Of course, and the fact must be considered, the programs of the scientific sections cannot be closed until the middle of January. In the meantime any member has a right to offer to contribute to one of them. However, other things being equal, it must be a matter of first come, first served. Neither the officers of a scientific section nor the Council on Scientific Work, is going to accept a second rate article, or one which does not fit in the general program, ahead of a first rate paper, or one which does fit into the program, merely because of priority in offer, but in many instances it is not possible to draw any such lines. Therefore the advisability of making offers early. It will be understood that no author who presented a paper at the last annual session will be eligible to present one on the next program.

In this connection we might suggest that those who are interested in presenting scientific exhibits at the next annual session, do something about it right away. The Council on Scientific Work would like to know just what exhibits are in prospect, at the time the scientific program is signed and sealed, and ready for delivery. It is frequently possible to closely coördinate our scientific exhibits with our scientific programs, presenting both articles and exhibits on the same subjects.

The following are those to whom application should be made in either connection:

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Dr. John M. Moore, Medical Arts Building, San Antonio.
Dr. W. W. Coulter, 1215 Walker Avenue, Houston.

Recognition of Lay Directed Quasi Medical Foundations.—The question has been so frequently directed to the office of the State Secretary recently as to whether or not the State Medical Association approves a certain lay directed, quasi medical organization that poses as an authority on venereal disease, that it is considered of sufficient importance to answer in these columns, that the answer may become available to the 4,468 members of the State Medical Association, and, as for that to such of the public as may have access to the JOURNAL. There is no reason for secrecy concerning the attitude or position of the State Medical Association toward this Foundation. On the contrary, it is exceedingly important that such members as are not fully acquainted with its policies and objectives, be informed concerning what their own organization thinks of it, as stated by those who, by virtue of their office, may speak for the State Medical Association.

This announcement is the result, as has been said, of many inquiries from our members. The following inquiry from a Councilor of one of the districts of the Association is quoted as an example:

"I am requested to make inquiry of you concerning the activities of the David Graham Hall Foundation and the Texas Social Hygiene Association of Dallas, Texas.

"Does this institution have the support and cooperation of the State Medical Association? Shall be pleased to have you give me any information along this line."

A letter was addressed immediately in response to this inquiry, stating that the work of the David Graham Hall Foundation and Texas Social Hygiene Association, as so far revealed in communications from the general director of the two organizations to physicians of Texas, is apparently very definitely against the best interests of patients afflicted with venereal disease in the State; that the State Medical Association does not approve the David Graham Hall Foundation or Texas Social Hygiene Association under their present direction.

Perhaps for any who are not informed on this subject, it should be explained that the reason that the State Medical Association does not approve the David Graham Hall Foundation and/or Texas Social Hygiene Association is that, under their present direction, they are not only organizations set up independently of the recognized governmental and lay-medical organizations working in this field, but that their activities to date manifest clearly a determined effort to discredit in the eyes of the medical profession and the public, the very splendid work being accomplished in venereal disease control in Texas by the Texas State Department of Health, operating with funds allotted for this work by the U. S. Public Health Service, and in hearty coöperation with the only scientific group qualified to deal with this problem in the State—the State Medical Association of Texas and its 129 constituent county medical societies, embracing the 254 counties in the State. The assertion that there is a definite intention to discredit is supported by the following excerpt from a communication addressed to doctors of Texas by the director of the David Graham Hall Foundation and the Texas Social Hygiene Association, under date of November 21:

"Conscientious members of the profession are not being protected from unconscienable [the spelling is his, not ours] activities of a minority group now allowed to violate various laws and ethics at will. We think it entirely unfair to challenge the integrity of the profession as a whole when it could be shown that the responsibility for ill-advised acts, apathetic attitudes and inaction lie chiefly with certain officials and leaders who have failed to provide doctors with information and other means essential to the execution of the purposes of various laws."

Elsewhere in these columns appears an authentic account of the splendid program of venereal disease control in Texas, being prosecuted scientifically, with all the vigor that is possible with available funds, by the Texas State Department of Health, with the active, hearty support and coöperation of the State Medical Association of Texas and its constituent county medical societies.

This discussion should answer clearly the question posed in the title of this editorial.

The Venereal Disease Control Program in Texas.—In July, 1938, funds first became available to the Texas State Department of Health, from the U. S. Public Health Service, for venereal disease control in Texas. In the year 1938-1939, $128,950 was received; in 1939-1940, $244,402; and in 1940-1941, $327,900.

The State Health Department at the beginning of this program sent a member of its staff to a recognized school of high standing for postgraduate study of venereal diseases. The State Health Officer immediately asked for an advisory committee from the State Medical Association to help plan the most effective venereal disease program possible for Texas with the funds available, in line with the requirements of the U. S. Public Health Service in such work. That request was immediately granted, and five outstanding syphilologists and urologists, all

with expert knowledge and recognized clinicians of wide experience, were appointed to serve in this capacity. This advisory committee from the State Medical Association has worked in the closest coöperation and harmony with the State Health Department in the planning and execution of a standard scientific venereal disease program. The Committee from the State Medical Association under a new administration for the second year has changed little in personnel, so that a continuing policy has been possible.

The personnel of the present Committee on Venereal Diseases of the State Medical Association, the committee above referred to, is: S. J. R. Murchison, M. D., Chairman, Fort Worth; Herbert T. Hayes, M. D., Houston; Thomas M. Jarmon, M. D., Tyler; J. M. Venable, M. D., San Antonio; Stewart Cooper, M. D., Abilene, and A. M. Clarkson, M. D., Austin (ex-officio member from the State Health Department and a member of the State Medical Association).

Turning now to a brief survey of the accomplishments of the venereal disease control program in Texas, conducted by the State Health Department in coöperation with county medical societies of the State Medical Association, under the advisory direction of the Committee on Venereal Diseases of the latter organization, 65 venereal disease clinics have been organized, principally in urban centers or in semi-rural areas with either a large negro or Mexican population. One hundred physicians, members of the State Medical Association, the majority of whom have had special training in the diagnosis and management of syphilis and gonorrhea, are serving in these clinics.

The clinics are organized with local financial participation between city and/or county governments, with the approval and coöperation of the local county medical society, the clinicians serving the clinics being selected with the approval of the county medical society in each instance. Only indigent venereal disease patients are treated in the clinics, and indigency is defined and determined locally. No fee is permitted to be charged at the clinics and the necessary clerical and nursing personnel of the clinics is provided for in the agreement between the local governmental unit, the State Department of Health and the county medical society.

The present venereal disease clinics in Texas operating under the program as described here, are located as follows, the names of the clinics, counties where they are located, and clinicians or directors serving them being given:

(1) Lufkin, Angelina County, Dr. M. O. Gibson; (2) Beeville, Bee County, Dr. A. J. Turner; San Antonio, Bexar County, Dr. Manning Venable; Texarkana, Bowie County (DeKalb, Maud, New Boston, Texarkana), Dr. Charles W. Kelley; Bryan, Brazos County, Dr. T. C. Dodd, Dr. R. H. Harrison, Dr. R. J. Hunnicutt, Dr. S. C. Richardson, and Dr. R. B. Ehlinger; San Benito, Cameron County, Dr. Grady Deaton, Dr. J. A. Hockaday, Dr. C. M. Cash, Dr. George R. Dashiell, and Dr. J. C. Watkins; Linden, Cass County (Atlanta and Linden), Dr. Fred K. Laurentz and Dr. E. W. Grumbles; Coleman, Coleman County, Dr. J. C. Young; McKinney, Collin County, Dr. Scott Wysong; Gainesville, Cooke County, Dr. J. W. Atchison; Dallas, Dallas County, Dr. Arthur Schoch; Cooper, Delta County, Dr. Osler Y. Janes; Waxahachie, Ellis County, Dr. J. B. Jenkins; El Paso, El Paso County (Cantillo, Clint, El Paso, Fabens, San Elizario, Socorro and Ysleta), Dr. J. B. Robbins; Galveston, Galveston County, Dr. W. F. Spiller; Pampa, Gray County, Dr. R. Malcolm Brown; Longview, Gregg County, Dr. E. L. Jones; Woodville, Hardin-Tyler Counties (Woodville and Kountze), Dr. A. L. Waller and two clinicians; Houston, Harris County, Dr. J. W. Brown and five consultant physicians; Haskell, Haskell County, Dr. Gordon Phillips; Edinburg, Hidalgo County, Dr. Joe May, Dr. H. E. Whigman, Dr. Thomas Glass, and Dr. Alfred Osborn; Hillsboro, Hill County, Dr. N. C. Smith; Big Spring, Howard County, Dr. M. H. Bennett; Greenville, Hunt County, Dr. H. C. Wilson, Dr. E. R. Hayes, and Dr. O. H. Trimble; Jasper, Jasper County, Dr. J. J. McGrath; Beaumont, Jefferson County (Beaumont), Dr. W. A. Smith and Dr. F. J. Beyt; Waco, McLennan County, Dr. Maurice Barnes; Midland, Midland County, Dr. R. B. Burns; Cameron, Milam County, Dr. Roy G. Reed, and two clinicians; Corpus Christi, Nueces County (Corpus Christi and Robstown), Dr. Gordon Heaney; Tyler, Smith County, Dr. D. T. Bundy and Dr. E. D. Rice; San Augustine, San Augustine County, Dr. J. E. Peavy; Fort Worth, Tarrant County (Arlington, Fort Worth and Mansfield), Dr. Porter Brown; Abilene, Taylor County, Dr. J. Stewart Cooper; San Angelo, Tom Green County, Dr. B. T. Brown; Austin, Travis County, Dr. Lee Edens; Uvalde, Uvalde County, Dr. Evan C. Bourdon; Del Rio, Val Verde County, Dr. D. A. York; Laredo, Webb County, Dr. A. T. Cook; Wheeler, Wheeler County, Dr. H. E. Nicholson; Wichita Falls, Wichita County, Dr. D. Lyle Robertson and Dr. J. D. Hall; Vernon, Wilbarger County, Dr. Emory D. Hollar; Raymondville, Willacy County, Dr. C. C. Conley.

It is understood, of course, that with such an extensive program, with many physicians contributing their time and skill as a public service, there are necessarily changes taking place routinely in the clinic personnel, in order to distribute the burden of such work on physicians.

As previously stated, the venereal disease clinics are established only in the more thickly populated areas. Sixty county medical societies are coöperating in this program where there are no venereal disease clinics, by the treatment of venereal diseases patients with free drugs furnished by the State Health Department, under very definite regulations governed by the local county medical society in coöperation with the State Health Department.

Free drugs are distributed by the State Health Department to all of the venereal disease clinics for the treatment of the indigent venereal disease patients in these clinics.

During 1938-1939, 56,456 Gm. of neoarsphenamine was distributed to the venereal disease clinics, and 6,786 Gm. for rural venereal disease patients where there were no clinics; in 1939-1940, 107,594 Gm. of neoarsphenamine was distributed to the venereal disease control clinics, and 13,336 Gm. for rural venereal disease patients; whereas in 1940, from July to October 1, 45,067 Gm. of neoarsphenamine had been distributed to venereal disease clinics, and 4,095 Gm. of neoarsphenamine for rural venereal disease patients in the same period.

In 1938-1939, venereal disease clinics received 127,950 cc. of bismuth, and 32,910 cc. of bismuth was distributed for the treatment of venereal disease patients in rural areas. In 1939-1940, 400,260 cc. of bismuth was distributed to the venereal disease clinics in the State, and 45,840 cc. of bismuth was distributed for the treatment of rural venereal disease patients. For the period from July 1, to October 1, 1940, 206,920 cc. of bismuth was distributed to venereal disease clinics, and 11,900 cc. of bismuth was distributed for the treatment of venereal disease patients in rural areas—all of the drugs above referred to being furnished free by the State Health Department from funds received from the U. S. Public Health Service in the program to stamp out venereal disease in this country. It should be understood that a much greater amount of drugs than that named here has been purchased with local funds and no accurate records are available for this figure.

Physicians in the sparsely settled areas where there are no clinics are serving the indigent venereal disease patients without remuneration. Thus it may be said that with the venereal disease clinics, and with the services being rendered by members of county medical societies in the more sparsely settled areas, where there are no such clinics, treatment is being provided for venereal disease patients in every section of the State who are unable to pay for the services of private physicians.

In addition to the clinic services, the State Health Department has arranged for the necessary laboratory services for clinics and for venereal disease patients where clinics do not exist, either through a coöperative arrangement with local, qualified laboratories, or through its own State Hygienic Laboratory.

In addition to this work, the State Hygienic Laboratory has rendered signal service in collaborating with the Texas Society of Clinical Pathologists in studies for the purpose of evaluating the services rendered by state laboratories and coöperating private clinical laboratories throughout the State. More than forty technicians have been trained in the State Hygienic Laboratory for services in private clinical laboratories throughout the State and the State laboratories.

In addition to the fine program of clinical work described, the State Health Department during the past two years has coöperated with the State Medical Association by supplying the necessary funds for the expenses of outstanding lecturers and clinicians among the medical profession, in conducting courses in the diagnosis and treatment of venereal disease. These courses have been brought to the practicing physicians in their home communities in all parts of the State. This postgraduate instruction has made available to the practicing physicians of Texas the latest and best information available on the treatment of venereal disease.

Plans are now under way and have been approved by local county medical societies and by the State Medical Association Committee on Venereal Disease Control, in cooperation with the State Health Department, to provide adequate venereal disease control services in the civilian population adjacent to areas where the large army camps are being located in the State. Every coöperation will be given military authorities in keeping venereal infection among troops to a minimum. While commercial prostitution may not be a major factor in the transmission of venereal disease in civilian population during peace time, it is recognized that it is an important factor in infecting army and navy personnel where there are large concentrations of men. The problem of repression of prostitution is legally that of the local police and sheriff departments, but assistance will be given to local enforcement officials in diagnosing and quarantining infected cases near the camp areas. The State Hygienic and the private clinical laboratories of Texas that have participated in the evaluation studies are now coöperating with the Selective Service System in Texas in making the necessary serodiagnostic tests as part of the venereal examination required of the draftees.

Thus it will be seen that Texas is fortunate in having a State Health Department that is functioning splendidly in the control of venereal disease in the State, and that the State Health Department is ably supported by the State Medical Association of Texas and its component county medical societies, making ridiculous inference or implication from any source that a comprehensive, scientific program of venereal disease control is not being prosecuted by the Texas State Department of Health and medical profession of the State

as represented by its State Medical Association and component county medical societies, with full publicity given to the program by the official publication belonging to the ethical medical doctors of Texas—the TEXAS STATE JOURNAL OF MEDICINE.

This assertion is further supported by the established fact that the present clinic case load of venereal disease in Texas is exceeded only by one or two states in the Union, despite the fact that Texas is a state whose population is largely rural, and it is universally recognized that the greatest incidence of venereal disease is in cities; and, furthermore, Texas ranks sixth in population among the states of the Union. With the type of program being carried out, under its scientific direction, the incidence of syphilis and gonorrhea in Texas will rapidly diminish. Only time and available funds are necessary for this accomplishment.

Texas has a venereal disease control program of which its medical profession and the public may be justifiably proud.

Is New Legislation Needed to Control Venereal Disease in Texas?—It is not proposed to answer this question here, because the only qualified group in Texas to answer such question is the Executive Council of the State Medical Association of Texas, composed of thirty-two physicians, representing every part of the State and elected to offices which give them membership in the Council, by truly Democratic representatives from 129 county medical societies embracing the 254 counties of Texas. The Executive Council acts for the State Medical Association of Texas in the period between regular or called meetings of the House of Delegates of the Association, and is the only group in the Association with authority to determine policy for the Association other than the House of Delegates.

The Executive Council of the State Medical Association will meet before the State Legislature of Texas convenes in January and decide, on recommendation from authoritative, scientific committees carefully chosen because of their special qualifications, the desirability of or necessity for new legislation, or amendments to existing laws. As far as venereal disease control in Texas is concerned, the Executive Council will most likely be guided in its decisions, as it should be, by the recommendations of the State Medical Association Committee on Venereal Disease Control, composed of the following:

S. J. R. Murchison, M. D., Chairman, Fort Worth.
J. Stewart Cooper, M. D., Abilene.
J. Manning Venable, M. D., San Antonio.
Herbert T. Hayes, M. D., Houston.
Thomas M. Jarmon, M. D., Tyler.
A. M. Clarkson, M. D., Austin, State Health Department (ex-officio).

The foregoing discussion is part answer to the ridiculous, untrue statement widely broadcast by the lay director of an organization operating in Texas independently of the universally recognized medical and lay-medical organizations qualified to speak with authority on such scientific problems as venereal disease control in the State. The medically directed organizations referred to are: first, the Texas State Department of Health and its subsidiary county health units and county health departments; second, the State Medical Association of Texas and its component county medical societies, with which latter group the State Health Department without fail consults with regard to the scientific features of any health program, because of its qualification to give such counsel. Outside of Texas the organizations with which the Texas State Department of Health and the State Medical Association coöperate in programs of venereal disease control are: first, the U. S. Public Health Service; the American Medical Association, and the American Social Hygiene Association. There is no need to inform any intelligent person of the standing of the U. S. Public Health Service or the American Medical Association, or, as for that, the American Social Hygiene Association. But, for the benefit of any who may be doubtful of the value of the last-named organization, we quote here letters to Dr. Ray Lyman Wilbur, president of the American Social Hygiene Association, from the Secretaries of the Army and Navy of the United States, which reflect their opinions of that organization.

The letter from Secretary of the Navy, Frank Knox, dated November 19, 1940, follows:

"I have your letter of November 18, 1940, outlining the work of the American Social Hygiene Association relating especially to national defense.

"The Navy Department recognizes the services of your Association in aiding civilian authorities and voluntary groups in areas surrounding our Naval Stations. The united action of such civilian forces in protecting our men against the damaging influences of prostitution and exposure to the venereal diseases on the one hand and the promotion of desirable recreation and leisure-time activities and facilities on the other is vitally important to success of the Navy's efforts to safeguard the health and morale of its personnel from the time they leave home until they are returned to civil life.

"I am glad to commend your work and financial needs to the consideration of the citizens of the country in the hope that your continued services may not be handicapped during the emergency with which we are faced.

Sincerely yours,
(Signed) Frank Knox."

The letter from Secretary of War, Henry

L. Stimson, to Dr. Wilbur, dated November 25, 1940, follows:

"As the first contingent of young men are being inducted into service for their year of military training, the War Department is becoming increasingly aware of its responsibility for their health and well-being. In the training camps already established or soon to be established, there will be gathered large numbers of the finest youth of the country who, in their leisure hours, will be seeking recreation in communities strange to them, and may find themselves exposed to temptations to which many of them are not accustomed.

"In addition to the moral aspect of the matter, the War Department is interested in the prevention of disease among the soldiers as a basic necessity in the creation of an efficient military force.

"The American Social Hygiene Association, because of its twenty-five years of activity in the campaign against venereal diseases, and particularly its experience in the first World War, is ideally fitted to aid in this task. The program which early this year you formulated, initiated and carried through in conjunction with the U. S. Public Health Service and the State and local health authorities, rendered a very great service to the Army during the maneuvers of the Regular Army and the National Guard last spring and last summer.

"Your assistance is of vital importance in forestalling the dangers of exposure to infection and I sincerely hope, therefore, that you will continue your aid to the military service and that the citizens of the United States will support liberally your efforts.

Sincerely yours,
(Signed) Henry L. Stimson,
Secretary of War."

It is pertinent to this discussion to point out that the Texas Social Hygiene Association, under the direction of a layman, who also happens to be General Director of the David Graham Hall Foundation, is not affiliated with the American Social Hygiene Association, nor, so far as we are advised, is the Texas Social Hygiene Association affiliated with or coöperating with any State or nationally recognized medical or lay-medical group qualified to work in such an important field as venereal disease control. It is no wonder, then, that the Committee on Venereal Disease Control of the State Medical Association of Texas, in a communication, November 27, 1940, to presidents and secretaries of the 129 county medical societies of Texas, embracing the 254 counties of the State, should point out that "the control of venereal disease, especially syphilis, is a public health problem," and that, "uncoördinated lay efforts are dangerous and impractical." The Committee cautions that, "unquestionably, efforts will be made at the next session [of the State Legislature] to introduce bills relating to the control of venereal diseases, with supporting evidence supplied by physicians who are not familiar with the present program of their own Association." And, further, the Committee emphasizes, "These control efforts are not sponsored by the medical profession and are not in harmony with our [scientific] standards and ideals." The Committee further points out that if such legislation were enacted it would only bring about "needless duplication of effort in the control of venereal diseases . . . . and increased expense to the taxpayer."

Returning now to the subject of this editorial, "Is New Legislation Needed to Control Venereal Diseases in Texas?" it is expected that a lay-directed organization will seek at the next session of the State Legislature to enact a law compelling serologic examinations of applicants for marriage. Let us consider here briefly the scientific implication of such a law if it were enacted.

First, the Director of Venereal Disease Control of the Texas State Department of Health, a physician specially trained in nationally recognized clinics for the position he holds, whose entire time, talents and energy, are given to the venereal disease control program in Texas, and who is constantly in consultation with a committee of outstanding syphilologists of Texas on this program, points out succinctly that,

"A negative Wassermann test does not mean that an individual is free from syphilis in an infectious stage. A negative smear for gonorrhea does not mean that the individual is not infected with gonorrhea. On the other hand, a positive Wassermann test does not mean that the individual has infectious syphilis."

The last statement in the above quotation has reference, of course, to the false positive Wassermann test, which, according to the authority quoted, is found when blood tests are done by laboratories not manned by competent personnel (and there are unfortunately too many such) on one person out of twenty subjected to such tests, who is entirely free of syphilis. The significance of such an occurrence if accepted as a diagnosis of syphilis, and its damaging implications, psychically and socially, upon the persons involved needs no discussion. Conditions in which false positive Wassermann or other serologic tests for syphilis are found that are not at all infrequent in Texas, are malaria, leprosy, relapsing fever, and infectious mononucleosis, as well as the acute exanthemata. The disease condition, infectious mononucleosis, which occurs commonly among large groups of young people collected together as at college, is of special significance in connection with the common practice of mass serologic tests at universities. The disease is mild, accompanied with very little fever and enlarged lymph glands, both of which symptoms are found in syphilis. If a positive Wassermann test were found in a routine mass serologic study of students at a university, on a boy or girl who had just recovered or was

recovering from a mild attack of acute infectious mononucleosis, who perhaps had not even had medical attention—and a diagnosis of syphilis was made on the basis of such serologic test alone—the psychic trauma and social tragedy inflicted on that young life would be immeasurable.

Let us quote here an eminent, universally accepted authority on syphilis in the United States, Dr. John H. Stokes, Professor of Clinical Medicine and Syphilology, University of Pennsylvania School of Medicine and Professor of Dermatology and Syphilology, Graduate School of Jefferson Medical College of Philadelphia, Pennsylvania, concerning his evaluation of the Wassermann test:

"Few laboratory procedures involve more variables and factors known and unknown than the Wassermann reaction. Not only do the reagents employed vary in strength, but every step must be subject to control, and may vary under the most unsuspected influences . . . The question as to whether single or repeated positive tests are false cannot be settled, in theory, short of a complete microscopic study of tissues at necropsy.

"I have gradually come to recognize that the single positive Wassermann test that is unaccompanied by any other detectable evidence of the disease, either in the form of other positives on numerous repetition or of further clinical or serologic evidence of the disease, on complete examination is likely to be a false or a nonspecific positive.

"From one-fifth to one-half the syphilis which an average clinician sees will present itself with negative Wassermann credentials and will have to be recognized by other means or go undetected . . . We are learning slowly and with travail to accept the negative serum Wassermann test as only an element in diagnosis instead of an infallibility.

"The routine blood Wassermann test is inevitably, from its availability, a species of diagnostic first line of attack . . . in the work of hospitals and group practices. If its limitations can be kept in mind, and it can be used by clinicians as a clue and not a crutch, its extension to the largest possible number of patients has much in its favor."

Shall we not, then, be guided in our efforts to stamp out syphilis by authorities in this field rather than uninformed laymen?

Finally, this discussion will be closed by quoting excerpts from a paper on "Compulsory Laboratory Tests," by Dr. A. M. Clarkson, Director of Venereal Disease Control, for the Texas State Department of Health, which paper will appear in full in the January, 1941 number of the JOURNAL.

The quotation follows:

"Syphilis and gonorrhea are rarely or never spread through the medium of intermediate objects, such as food and glassware, handled by cafe operators, and it is no more just that they should be compelled to have blood tests than you or I. Compulsory blood test laws will force the physician to certify that an indivdual is free from syphilis when the infection might be in the incubation stage and indiscernible by either clinical examination or laboratory test. On the other hand an individual may have an examination today and contract syphilis or gonorrhea tomorrow. You can thus see the fallacy in making laws which usually prescribe that food handlers must have a blood test every six months as is the usual custom.

"States that have recently enacted laws forcing individuals to undergo blood tests before contracting marriage are finding that their laws are incorrectly written and drawn up, and are doing more harm than good. The State of Illinois passed a pre-marital blood test law becoming effective in 1937. In the year 1937 only 26,808 couples took out marriage licenses in Chicago when the year before, 1936, 51,000 such licenses were issued. Let me repeat, the diagnosis of syphilis cannot wholly be made upon laboratory tests. Laboratory tests in incompetent hands are in many instances false. The laboratory test does not tell whether syphilis is in an infectious stage or not. Pre-marital laboratory tests will not prevent infants being born with syphilis. The prevention of congenital syphilis is that the syphilitic mother must be treated through her pregnancy. Laws like this will increase illegitimacy and common law marriage. It is like locking the stable door after the horse is stolen. Let us apply more education to the people and not have laws that will be eventually ignored and turn the people's interest and support completely away from a most worth while program when scientifically carried on. The State Medical Association numbering 4,468 physicians in Texas and the State Health Department are working shoulder to shoulder in building up an adequate program in Texas that will be more effective in eliminating these diseases than any law can ever do."

It was stated at the beginning of this discussion that it was not proposed to answer the question title of the editorial, "Is New Legislation Needed to Control Venereal Disease in Texas?"—because that decision will be made for the State Medical Association by either its Executive Council or House of Delegates, acting on recommendations of its scientific committee on venereal disease control, but the writer of this editorial will give it as his unofficial opinion that the question will be answered in the negative. After the Council meets and makes decision, county medical societies and members of the Legislature of Texas will be informed by the Executive Secretary of the State Medical Association of that decision and the scientific reasons on which it is based. We have faith in the discriminating judgment of members of the State Legislature in deciding whose opinions concerning this scientific subject should be given credence, in making their determination whether new legislation is needed to control venereal disease in Texas.

The Election of Officers of County Medical Societies to serve during the ensuing year, for the most part takes place during the month of December. Some occur earlier, and some later. Even so, the calendar gives us an excuse to urge our members to attend the regular sessions of their respective county medical societies, and help set up the machinery for the forthcoming year. This is a much more important matter than we ordinarily think.

The dependence put upon the medical profession by the Government, and many agen-

cies of welfare, is growing day by day and in every way. What is everybody's business is nobody's business, as we have heard many times. If the medical profession does not get together and prepare the machinery for rendering the service it is called upon to render, that service will be poorly and ineffectually rendered. The county medical society is the agency for such activities, and the only one which can serve adequately. That means that the members of the society should make certain that their president, who is their leader, is in fact a leader, and that their secretary, who is the executive officer of the organization, is active, enterprising and willing to serve. He will not likely be induced to superservice by his salary. The obligation to serve is there, even so, and failure to serve is as much a violation of the obligation as if a large salary were involved. Special care should be exercised in selecting the secretary. The other offices are important, of course, but we may not discuss all of them here, and, therefore, content ourself with reference to these two.

It is mighty fine, and frequently a fitting thing to do, to elect our good fellows to offices of a more or less honorary character, but the two offices mentioned, at least, and at this particular time, should be carefully selected in view of their willingness to serve.

And it is a mighty fine habit to pay dues at the time of the election of officers.

The Early Payment of Dues is earnestly solicited. The Trustees have invested the money of the State Medical Association so completely that unless a fair amount of dues are paid during the month of December, we will likely be forced to borrow a little money to tide over. Of course, that is not fatal, but it might as well be avoided. The cost is, after all, small, but the Association has accumulated money heretofore by looking after just such small items as that. If it were a matter of added expense, or trouble to our members, we would not be inclined to insist upon it, but neither is the case. It would be a perfectly splendid idea, as we see it, to get this item of expense out of the way before we really get busy in the spending line, along about Christmas, and before we have to pay off in early January.

In spite of our many efforts to explain the matter to our members, there are still those who do not understand that membership actually ceases on January 1, unless dues have been paid by that time. Actually nobody is dropped from the rolls on January 1 for non-payment of dues, or at any time thereafter until the county society annual report must be made out. This report must be in the hands of the State Secretary on April 1. At that time, it is known of all men who are members and who are not members, and non-membership backs up to January 1. The reason this is true, is that the county society secretary actually has until April 1 in which to make a record of the membership of his society, even though, as generally is the case, he remits dues as fast as they are paid. There is always the possibility that the question of membership during this interval will be raised, as in the matter of medical defense, for instance. Should a member who has not paid dues for the year in the meantime be sued for medical malpractice, the Association could not contribute to his defense, even though he had subsequently paid for the entire year. It is a technical matter, but the inhibition would stick if anybody called it into play.

Another situation which confuses our members in the matter of the period for which they pay dues, is subscription to the JOURNAL. While the membership year is from January to January, subscription to the JOURNAL is from May to May. Thus the period of uncertainty as to who are in good standing, namely, January 1 to May 1, is covered by the old subscription. Except for that, it would be necessary to determine earlier in the year for whom dues have been paid, in order that we might know for whom subscription has been paid. Nobody wants to thus force the issue.

The important thing is, membership actually begins on January 1, and there is no such thing as a delinquent member. For this reason, we feel free to urge that our members pay their dues during the month of December.

More Changes in the Official Family.—Dr. D. R. Venable of Wichita Falls, long a member of our Association and at one time Assistant to our Secretary-Editor, has removed to Columbus, Georgia, where he has accepted the position of Pathologist to the City Hospital. He has resigned his position as Secretary of our Section on Clinical Pathology as a consequence of this move, and the President has appointed Dr. Sim Hulsey of Fort Worth, another veteran of the scientific service of the State Medical Association, to fill the unexpired term of Dr. Venable. We regret to lose Dr. Venable, and wish him well. We are glad to have Dr. Hulsey take over in the Section on Clinical Pathology, and we wish him well.

The Committee on Post Graduate Medical Education has been completed through the appointment thereto of Dr. Lee Rice of San Antonio, and Dr. Joe Thorne Gilbert of Austin. Dr. Rice is well known for his activities

in organized medicine, and for his scientific attainments. Dr. Gilbert is relatively a newcomer to the ranks of organized medicine, but in the short while he has been with us he has manifested those characteristics of medical leadership which have caused our President to select him for this important service.

Dr. A. F. Beverly of Austin, has been accredited as a delegate to the Texas Safety Association, Inc. It will be remembered that the State Medical Association has been in active coöperation with the Texas Safety Association almost since its beginning. There are many problems of interest to that organization in which the State Medical Association is also interested. Dr. Beverly has long served the Association in important capacities, particularly as councilor for his district, and as a member of the legislative committee. Only recently he asked for a vacation from these responsibilities, and his request was grudgingly granted. He is now being called back to part time, although important service.

VITAMINS IN BREAST MILK

"Breast milk can furnish to the baby only such vitamins as are taken in the mother's food," *The Journal of the American Medical Association* for March 30 points out in answer to an inquiry as to whether or not such milk contains sufficient vitamins for the infant, and if so for how long a time.

"It is therefore obvious that, unless the mother has a diet rich in vitamins C and D, she will not furnish an adequate supply of these vitamins to the baby. It is for this reason that it is strongly advisable to begin both orange juice and some form of vitamin D early in infancy. As it takes some time for either a vitamin C deficiency—that is, scurvy—or a vitamin D deficiency—that is, rickets—to develop it is impossible to say for how long a time the mother's milk alone would be adequate to protect a newborn baby. The only safe procedure is to take no chance and to supply these vitamins from earliest infancy on."

NEW METHOD FOR PRESERVING BLOOD PLASMA FOR TRANSFUSIONS

A new and economical process for drying human blood plasma after it has been frozen, to preserve it for use as a substitute for whole blood in transfusion, is described in *The Journal of the American Medical Association* for Sept. 28 by Earl W. Flosdorf, Ph. D., F. J. Stokes, M. A., and Stuart Mudd, M. D., Philadelphia, who emphasize its importance in time of war.

Plasma is the liquid portion of the blood before clotting. "In dry form resulting from desiccation (drying) from the frozen state," the authors say, "the plasma proteins may be maintained in highly stabilized form, without refrigeration except for long time reserve-storage, and are instantly available for use by dissolving in water to the original or to a more concentrated volume. War-time emergency increases the importance of ready availability of large reserves of this agent in the dry stabilized form."

The new process is more economical than earlier procedures for vacuum drying on the large scale required, the authors say.

THE DIFFERENTIAL DIAGNOSIS OF DISEASES WITH HEMORRHAGIC MANIFESTATIONS*

FRANK J. HECK, M. D.
ROCHESTER, MINNESOTA

Diseases with which hemorrhagic manifestations are associated may be divided, for purposes of convenience, into two large groups: first, a group of cases in which there are changes either in the formed elements in the blood or in the factors responsible for coagulation and, secondly, a group in which, up to the present, no such changes as occur in the first group have been demonstrated and in which we must look to the blood vessels and more particularly to the capillaries for an explanation of the phenomenon of bleeding. Petechiae, ecchymoses and hematomas are usually present, either singly or in combination.

In attempting to work out the most satisfactory line of attack, it is necessary that proper inquiry be made not only as to the chronologic development of symptoms but in addition inquiry should be specifically directed toward (1) the family history, so that knowledge of hereditary and familial types of diseases of bleeding may be elicited; (2) a thorough review of any drugs which may have been taken, and (3) inquiry concerning allergic manifestations, particularly sensitivity to foods.

From the standpoint of laboratory study, the general practitioner, if so inclined, usually can carry out the necessary procedures. The determination of bleeding time and coagulation time, clot retraction time, and so forth, are simple and do not require extensive or expensive laboratory equipment. In addition, the concentration of hemoglobin and the number of erythrocytes, leukocytes and platelets should be determined. Careful study of the blood smears is important; in some instances, this will require the services of one with much experience in morphologic hematology. From an examination of the blood smear, one may obtain a very clear idea as to whether there is a decrease in the number of platelets. However, more important than this is the careful evaluation of the leukocytes to exclude leukemia and the demonstration of whether there is normal regenerative activity of the erythrocytes. In special instances, determination of prothrombin time as evidence of a deficiency of vitamin K may be desirable. Sternal aspiration may be necessary and desirable although it is difficult to say whether accuracy of diagnosis will be im-

*From the Division of Medicine, The Mayo Clinic, Rochester, Minnesota.

*Address delivered before the Section on Medicine and Pediatrics, State Medical Association of Texas, Dallas, May 15, 1940.

proved. For the time being, at least, sternal aspiration is desirable in cases of thrombocytopenia in order to gain a complete picture of the disease being treated.

Purpura haemorrhagica or essential thrombocytopenia affects persons in all decades of life. Most observers classify such cases into acute and chronic types. Further subdivision of thrombocytopenia into idiopathic or secondary types is made.

In taking the history of patients who have hemorrhagic manifestations, particular inquiry should be made into the family history so that any hereditary tendency may be disclosed. Since it has been shown in recent years that a number of drugs in relatively common use may cause thrombocytopenic purpura, specific inquiry should also be made as to possible use of quinine, sedormid, phenobarbital, arsphenamine, chrysarobin, bismuth preparations and sulfanilamide. This list will undoubtedly be increased as time goes on. Rosenthal has recently reported out of a total of 153 cases of thrombocytopenic purpura, sixteen cases which were due to the use of drugs. Simple withdrawal of the drug, as a rule, leads to complete recovery. Squier and Madison have reported cases of thrombocytopenic purpura secondary to sensitivity to food with relief from symptoms following withdrawal of the offending substance or substances. Opinion, however, differs as to the frequency with which allergic reactions play a part.

The symptomatology is the same in both groups and consists in the development of petechiae, ecchymoses and occasionally hematomas together with epistaxis or bleeding from the mucous membranes, as well as menorrhagia, frequently. The degree of anemia and the symptoms that depend on anemia are determined by the severity of the illness. The number of platelets is reduced to less than 100,000 but there is no fixed level of platelets below which bleeding regularly occurs. The bleeding time is prolonged. The coagulation time is normal. Clot retraction is usually markedly delayed. In examining blood smears, particular note should be made of whether there is at least normal regeneration of erythrocytes. The number of leukocytes should be normal or slightly increased. The differential count should be normal although in some instances the number of neutrophils may be increased. If leukopenia with relative lymphocytosis is found, great care must be exercised to exclude the possibility that aplastic anemia is present. Likewise, if there is immaturity of either the myeloid or lymphocytic elements the diagnosis of leukemia must be carefully considered although in the presence of severe anemia and an actively regenerating bone marrow, occasional immature myeloid cells may be seen. At present, many workers interested in purpura haemorrhagica feel that examination of sternal bone marrow is necessary for a complete picture. Limarzi and Schleichen have reported recently on studies of bone marrow in five cases of thrombocytopenic purpura. Increased numbers of megakaryocytes were found which were either adult in character or in the more acute cases were somewhat immature. It is necessary to collect more data on cases of this kind in order to evaluate the procedure. There can be no question as to the great value of examination of sternal marrow as an aid in the diagnosis or exclusion of leukemia and multiple myeloma.

Recently, Rosenthal has reviewed the various methods of treatment for essential thrombocytopenia and pointed out that medical treatment is unsatisfactory if one excludes the form that occurs in children and the acute form that occurs in some adults. In those cases that occur after acute infections or that are due to a drug idiosyncrasy, recovery occurs in a very high percentage of cases. Blood transfusion is the most valuable form of medical treatment and it may be possible to tide patients over a critical period until the diagnosis has been established and until splenectomy can be performed. Rosenthal has found the use of ascorbic acid, sesame oil, liver extract and parathyroid extract to be of no benefit and our experience coincides with this impression. Some success has been reported by some observers to follow irradiation therapy but other observers have not found this of help. Rosenthal and Peck have found moccasin snake venom to be of benefit in some chronic cases of essential thrombocytopenia in which the patient refused to have splenectomy performed. It should be noted that although there was relief of symptoms, no change could be shown in the number of platelets and only occasionally was there a change in the bleeding time. Thus, the remedy was only palliative. In chronic cases with mild symptoms no particular treatment is necessary but in severe cases splenectomy is indicated.

A very high percentage of the cases of thrombocytopenic purpura occurring in children is subject to spontaneous recovery and splenectomy should not be carried out unless there is evidence that the disease is definitely becoming chronic or unless there is a progressive increase in symptoms. In acute cases, it is frequently a difficult problem to decide how long the patient may be carried along in safety on medical management before splenectomy is performed. Rosenthal felt that in the very acute cases with high

fever, leukocytosis and retinal hemorrhages, splenectomy is followed in a high percentage of cases by death, and in one group of cases of this type which he has reported, medical management did seem to carry a lower risk than splenectomy. However, it has been our experience that splenectomy can be carried out successfully in some of these cases, even in the face of symptoms of this type. In the past, no satisfactory explanation has been forthcoming as to the exact cause of the death of some of these patients following splenectomy. There is a feeling, however, that if on sternal aspiration a decrease in the number of megalokaryocytes is found, these patients are unfavorable risks for the operation. This, however, requires further corroboration.

In the postoperative period, transfusions may be necessary although in many instances the bleeding stops promptly after splenectomy has been accomplished and does not recur. During this period, iron therapy is indicated if there has been a large loss of blood from the mucous membranes. The injection of liver extract has not been shown to be of benefit. A small number of patients will have recurrences of symptoms which may be mild or occasionally very severe, so that the bleeding cannot be controlled and death will result from the exacerbation of the disease.

In the differential diagnosis of essential thrombocytopenia, the two diseases the presence of which is most important to exclude are leukemia and aplastic anemia. Acute leukemia is commonly accompanied by hemorrhagic manifestations and from the history alone or from the clinical findings there may be no way of distinguishing between acute leukemia and essential thrombocytopenia. A study of the bleeding time, the number of platelets and other factors in coagulation may show them to be exactly the same as those associated with essential thrombocytopenia, so that in the final analysis the diagnosis will depend on careful examination of the blood smears. When there is evidence of immaturity, such as stem cells or myeloblasts in the circulation, we are usually dealing with a leukemia.

As a rule, the experienced hematologist has little difficulty in distinguishing between essential thrombocytopenia and acute leukemia by examination of the blood smear alone but there are instances in which there is only very occasional immaturity in the leukocytes and unless this can be satisfactorily explained on the basis of increased regeneration, examination of the sternal marrow is imperative. It is, of course, conceivable that examination of the sternal marrow may not give the answer but in almost all cases, if leukemia is present, the diagnosis can be made in this manner. At present, various pictures are described as being associated with aplastic anemia. When one has a case typical of those described by Ehrlich there should be little difficulty in diagnosis. In this type of case there is the development of a progressive anemia with hemorrhagic manifestations, a progressive leukopenia with increasing relative lymphocytosis, and the absence of signs of regeneration in the erythrocyte series as evidenced by consistently low or negative values for the reticulated erythrocytes. A study of the bleeding and coagulation factors may show them to be exactly the same as in thrombocytopenic purpura. Sternal aspiration will show a relatively acellular marrow with a marked decrease in the regenerative activity of the myeloid-erythroid tissue. We have found that, if any of the significant factors in a case are not typical of essential thrombocytopenia, one must be extremely cautious in suggesting splenectomy as a method of treatment since we usually get into difficulties if we do so.

In other thrombocytopenic purpuras which are secondary to infectious diseases, recovery usually occurs spontaneously, although we have seen occasional cases in which the bleeding was so extreme and prolonged that we have felt that splenectomy was warranted. In instances of thrombocytopenic purpura following the ingestion of drugs, transfusion may be necessary, particularly in some instances in which there are severe symptoms such as may follow the use of arsphenamine, and particularly when sulfarsphenamine was used in the treatment of syphilis. In our experience, sulfarsphenamine was followed much more frequently by hemorrhagic manifestations than was arsphenamine. Occasionally, purpura appears following metastasis of a carcinoma to the bony skeleton or as an accompaniment of multiple myeloma.

Henoch-Schoenlein purpura is, in our experience, a relatively rare disease. It is characterized by a diffuse purpuric eruption and polyarthritis. There may be associated abdominal pain, nausea, vomiting and bleeding from the intestinal or urinary tract. The diagnosis is made on the basis of the history and on the absence of any abnormal changes in the blood. Treatment is symptomatic and recovery is the rule.

We frequently see individuals with purpuric manifestations, in the lower extremities, which do not fit into any well described groups. These are more frequent among females than among males and are usually asymptomatic. Examination of the blood

gives negative results. Static factors seem to be present in some of the cases although there are no other symptoms which would place these cases in the group of Henoch-Schoenlein purpura. Although these manifestations have been classified as infectious or toxic purpura, in most instances there is no good evidence to justify such a classification.

In cases of obstructive jaundice there may be excessive bleeding, particularly after some surgical procedure and this frequently cannot be controlled by transfusion. The capillary bleeding time is usually normal and the number of platelets is usually within the limits of normal. In the past, excessive bleeding associated with obstructive jaundice has been attributed to alteration in the calcium content or to some defect in coagulation. In the past few years, as the result of work by various investigators, it has been shown that the bleeding in cases of jaundice is due to a deficiency in vitamin K. By supplying this material preoperatively in its various forms, the danger from bleeding is markedly reduced. Further work must be done in other fields to determine whether it will not be applicable and useful in other diseases in which surgical interference may be necessary. In passing, I should like to remark that the methods for the determination of prothrombin time as applied to vitamin K deficiency are entirely different from those of determining the Howell prothrombin time recommended in the past as an aid in the diagnosis of hemophilia.

In cases of hemophilia, we can usually obtain a family history of the disease. Males are affected by the disease but the disease is transmitted through the females. Too much emphasis should not be placed on the familial history in diagnosis since occasionally this may be absent. Examination of the blood reveals no morphologic change. The bleeding time is normal but the coagulation time may be prolonged. The prothrombin time, as suggested by Howell, may be prolonged. All types of cases and degrees of severity are seen. Bleeding may be so severe from a trivial cut that death may result. Hemorrhages into joint spaces with subsequent contracture deformities are common occurrences. There is a tendency for the disease to become less troublesome as the patients grow older. We have learned that one must always give proper recognition to the statement by a patient that he is a "bleeder," even though all laboratory data are normal. Failure to do so may lead to serious consequences for the patient. In acute attacks of bleeding, the use of repeated transfusions is the best method of treatment. If some surgical procedure is imperative, the patient should receive transfusions both before and after operation. Recently, the use of concentrated globulin fraction has been employed with reduction in coagulation time. However, this material is not on the market. The use of estrogenic substances as advocated by Birch has not been followed by the beneficial results hoped for.

The diagnosis of familial epistaxis and multiple hereditary telangiectasia must be made on the basis of the history and physical findings in the presence of normal blood findings.

In recent years, Peck and Rosenthal have advocated the use of subcutaneous injections of moccasin snake venom for the control of symptoms in the anaphylactoid or toxic purpuras, for familial epistaxis, multiple hereditary telangiectasia and functional uterine bleeding. Some benefit has also been seen following its use in cases of essential thrombocytopenia and it has been of distinct benefit in cases of essential hematuria.

SUMMARY

The diagnosis of diseases associated with purpuric manifestations depends on a correlation of the history, physical findings and proper studies of the blood. On such a correlation, proper therapy depends.

BLOODLETTING FOR HEMOPHILIA

Bloodletting from a vein (venesection) kept a hemophiliac patient or hereditary bleeder free of symptoms for seven years, George B. Lawson, M. D., Roanoke, Va., and A. B. Grayheal, M. D., Marion, Va., report in *The Journal of the American Medical Association* for June 8.

The patient was completely incapacitated because of joint symptoms (pain and swelling), nervousness and apprehension that occurred with the bleeding. Venesection, about once every six weeks, at the onset of symptoms kept the patient rather well for the seven years, except for discomfort in one knee. An x-ray of this knee showed cysts in the region of the knee cap and thigh bone.

The patient died about seven and a half years after the first venesection. The cause of death was reported as being due to "massive hemorrhage below the chin and contributory cerebral swelling brought about by an abnormal collection of fluid."

NO EVIDENCE BLOOD OF FORMER VICTIMS COMBATS STREPTOCOCCUS VIRIDANS

In spite of newspaper publicity implying that blood transfusions from a patient who has recovered from Streptococcus viridans endocarditis (inflammation of the membrane lining the heart) are curative, there is no adequate evidence that such transfusions have resulted in cure, *The Journal of the American Medical Association* for Oct. 5 declares in answer to an inquiry.

In reply to the inquirer's question as to the criteria determining recovery from the disease, *The Journal* says that many patients experience a period of arrest, but only after two or three years of freedom from fever and absence of other symptoms can a patient be considered to have recovered.

CHROMAFFIN CELL TUMOR ASSOCIATED WITH PAROXYSMAL HYPERTENSION*

P. L. ALLEN, M. D.
WEATHERFORD, TEXAS

The adrenal gland is composed of two differentiated tissues, the cortex and medulla. The cortical cells arise from the coelomic epithelium which later forms the wolffian body and urogenital fold, and they in turn form the testes and ovaries.[4]

The medullary cells are derived from the sympathetic nervous system. The cells are mature and undergo chemical changes so that on staining with a chromate solution they turn brown and are called chromaffin cells or pheochromes. This chromaffin tissue is found not only in the medulla, but elsewhere in the body, notably in the ganglions of the sympathetic system.[4]

There are four types of tumors which develop from the sympathetic nervous system or adrenal medulla:

1. Sympathoma embryonale, which is very rare and usually congenital.
2. Symphoblastoma, which is similar to type one.
3. Ganglioneuroma, which occurs mostly in young women.
4. Chromaffin cell tumor or pheochromocytoma, consisting of mature chromaffin cells which are polyhedral in shape and contain no glycogen or lipoid. There is usually only one nucleus to a cell although some of the cells assume the form of giant cells. The color of the cells is due to the presence of fine and coarse granules distributed throughout the cytoplasm. Pick suggests that when these tumors arise from the medulla they should be called pheochroma cytomas; when arising from the sympathetic ganglion they be named paraganglioma, thus better distinguishing the predominating type of cell.[4]

The chromaffin cell tumor is the most important of the sympathetic tissue tumors. These tumors occur only in adults and usually are benign. Coller, Bell and Powell have shown that if these tumors take the chromate stain they are nearly always associated with paroxysmal hypertension.[2]

CASE REPORT

Mr. G. A. W., a white man, age 50, was first seen January 7, 1936, at the home of his brother in Weatherford, Texas.

His chief complaints were high blood pressure, shortness of breath, nervousness, nausea, dizziness, palpitation of the heart and weakness. He dates his first trouble back to 1920, at which time he experienced occasional attacks of dizziness and palpitation. The symptoms were not severe enough to alarm him even though he was told by his family physician that he had high blood pressure and should lead a quiet life. In 1923 the attacks recurred with greater frequency and severity and at that time, in addition to dizziness and palpitation, he also had gastric distress with nausea and vomiting. From 1923 to 1928 he got along fairly well, having periodic attacks as described. In February, 1928, he had a severe illness of six months duration, diagnosed as influenza. Since that time he had considered himself in very poor health, having been unable to carry on his usual work. The attacks of fast heart, dizziness, nausea and vomiting had occurred very often and were quite severe. He stated definitely that turning on his left side would nearly always precipitate an attack. Becoming worried, anxious or nervous would often bring on his trouble. However, the attacks had occurred without apparent cause. He described his attacks as follows:

He would usually become dizzy and have a generally let-down feeling. His heart would begin to pound, and he would become nervous and restless. He would be short of breath and experience a feeling of fullness in the upper abdomen. This would be followed by nausea and then vomiting. The vomiting would seem to give relief and he would soon feel better. His family had noticed that while in an attack he became pale and several times his lips and fingers had turned blue. After an attack he would be very weak and exhausted for some two or three hours. The symptom complex proper would not last very long, usually five to fifteen minutes.

Past History. Prior to 1920 he had been in excellent health. He had had the usual childhood diseases.

Family History. His mother died at the age of 30, at childbirth. His father died of Bright's disease at the age of 55. One brother died of heart trouble at the age of 50. Three brothers are living and well. One sister is living and well.

Social History. He had never married. He worked in the oil fields as a driller. He did not use alcohol or tobacco to excess.

Physical Examination. The weight was 150. The temperature was 101° F., pulse 100. Pus was draining from the right ear. The ear had been opened two days previously, which accounted for the fever. The left ear was normal. The ocular fundi showed marked narrowing of the blood vessels. The teeth showed evidence of dental sepsis. The throat and tonsils were normal. There was no adenopathy of the glands of the neck. The thyroid was not enlarged. The chest was negative, other than over the posterior aspect at the base of both lungs coarse, moist rales were heard.

Heart. The point of maximum impulse was in the sixth interspace, one-half inch to the left of the nipple line. There was a thrill over the apex and aortic areas. A systolic murmur was heard at the aortic area and also over the mitral area. The murmur was due to roughening of the valves of the aorta.

Several determinations of blood pressure were made. I had been told the patient had high blood pressure. With this in mind, before talking to him or making a complete examination, I took his blood pressure and found it to be only 130 systolic, 90 diastolic. After talking to him at length and making a more complete physical examination, I noticed that he was becoming dyspneic, pale and very nervous. He soon became nauseated. A blood pressure reading was taken, and to my surprise, it registered 250 systolic, 140 diastolic. I left the room and waited fifteen minutes and again took his pressure. He was feeling better, and the reading was 150 systolic, 110 diastolic. Thirty minutes later the reading was 130 systolic, 90 diastolic.

No palpable masses were noted in the abdomen. There was no localized area of tenderness, although

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pressure over the epigastrium brought on a feeling of nausea. The prostate was normal, and the reflexes were normal.

In order to further observe the attacks, the patient was placed on a sedative and rest regime. In the course of the next few days, he suffered an attack approximately every eight to ten hours. The attacks were all very similar, except in their severity, the blood pressure ranging from a reading of 120 systolic to 250 systolic and back to 120 systolic. The highest reading observed was 250 systolic.

A working diagnosis of tumor of the adrenal medulla was made and further laboratory procedures were carried out. Urinalysis was entirely negative. A blood sugar estimation when the blood pressure was 180/90 showed 75 mg. per 100 cc. A blood sugar estimation when the blood pressure was 250 systolic, 130 diastolic, showed 90.6 mg. per 100 cc. The laboratory findings here should have shown an elevation of blood sugar.

An electrocardiogram made when the blood pressure was 180 systolic, 90 diastolic; and the heart rate 90/90 ventricular, auricular, showed slurring of the Q. R. S. in leads 1 and 3, an inverted T in leads 1 and 2; diphasic T in lead 3.

Roentgenograms of the chest and abdomen were made, and the findings were negative, except that the chest plate confirmed hypertrophy of the heart. A pyelogram was not made.

A blood count showed hemoglobin 88 per cent; red blood count 4,600,000; white count 12,500; differential eosinophiles 2; segmented forms 76; lymphocytes 17.

Nothing diagnostic was learned from the laboratory findings, but considering the clinical picture as a whole with the dramatic recurring attacks of hypertension, it seemed evident that there must be some tumor involving the adrenal medulla. With this in mind, the patient was advised to have an abdominal exploration, and was told that it was to be done with the hope of removing an adrenal tumor. The patient would not consent to this procedure, so was allowed to return to his home in Mingus, Texas.

The patient was not seen for a period of six months. I was then called to his home, where he was found to be in a very critical condition. He was hospitalized and his course the first three days was one of improvement. His blood pressure at this time ranged from a low of 140 systolic to a high of 200 systolic. On the fourth day he had a severe attack, lapsing into a coma with elevation of temperature. There was no evidence of brain hemorrhage. He remained in this coma with a blood pressure of 250 systolic, 150 diastolic, with a temperature 103° to 105° until his death four days later.

Permission was granted for abdominal necropsy. A mass the size of an orange was found retroperitoneally and at the upper pole of the right kidney, but not displacing the kidney. The mass weighed 13 Gm. The pathological diagnosis was chromaffin cell tumor of the adrenal medulla, non-malignant.

The clinical picture in this case is one of marked sympathetic nervous instability. While observing a patient going through this syndrome, one can not help but compare the similarity of the subjective and objective findings with those found in patients who have been given large doses of adrenalin. There is, in the literature, evidence that these tumors do cause formation of large amounts of adrenalin. Kelley recites a case of medullar tumor removed surgically, which contained 300 mg. of crystalline epinephrin.[3] An explanation of the paroxysmal hypertension as seen in these patients, to me would be the sudden output of large amounts of adrenalin into the blood stream as a result of pathologic changes in the medulla. Laboratory procedures to determine adrenalemia are quite difficult and not accomplished with the usual laboratory equipment. Edwin Beer has shown the presence of adrenalin in the blood stream by laboratory procedure in a case of chromaffin cell tumor, and he is of the opinion that there is associated adrenalemia with chromaffin cell tumor.[1] The manner in which free adrenalin would escape into the blood stream is controversial. The most accepted theory is that of physical movements, and I feel that this is shown in this particular case by the fact that when the patient turned on his left side, he could always precipitate an attack, the pressure probably being due to the weight of the liver against the gland.

Surgical removal of the tumor effects a cure provided the patient is able to withstand the primary shock, which is very severe.

X-ray therapy may be palliative, but is of no value in effecting a cure.

SUMMARY

1. A new case of chromaffin cell tumor of the adrenal medulla is reported.

2. These tumors are derived from and related to the sympathetic system.

3. Excessive secretion and outpouring of adrenalin into the blood stream explains the paroxysmal hypertension and clinical syndrome.

4. Surgical removal is the only treatment.

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ABSTRACT OF DISCUSSION

Dr. W. W. Bondurant, Jr., San Antonio: I am in the unfortunate position of attempting to discuss a condition which I have never seen clinically. We can only admire Dr. Allen for his recognition of a disease which is so rare and which, therefore, we frequently forget. From what I have read in the literature Dr. Allen has presented a case which embodies the typical features of chromaffin cell tumor of the adrenals: a patient experiencing short paroxysmal attacks with symptoms and signs of overdosage of epinephrine. These attacks may be incited by psychic factors; they have been reported in several instances to have occurred during the physical examination of the patient. Body movements, especially those of the trunk, and those things which nat-

urally call out the normal secretion of epinephrine have also brought on episodes. They are characterized by general weakness, tremulousness, oppression in the chest, tight feeling in the throat, labored heart, throbbing headaches, nausea, vomiting, blanching of the face, numbness of the extremities, rapid and marked temporary increase in the blood pressure and in some instances pulmonary edema and death. Exhaustion follows. The only treatment is surgical removal of the tumor. These cases show a high incidence of shock and a high percentage of patients die after operation. The outlook is better now that it has been realized that the preoperative and postoperative treatment must be that of a case of Addison's disease, with free use of transfusions, adrenal cortical extracts and sodium salts. Many patients have had appendectomies before the real nature of the condition was discovered.

It has been believed that chronic hypertension may result from the presence of these tumors. Certainly they must represent only an infinitesimal number of the extremely large group of hypertensives we see.

Very often we are confronted with the problem of attacks of weakness, or of palpitation and nervousness in patients presenting the appearance of chronic sympathicotonia. Only rarely do we observe them in one of these attacks. In the past I have considered the episodes to be due to repeated extrasystoles, or paroxysmal auricular fibrillation or tachycardia or in some instances to the vasomotor phenomena of the menopause. I see now that we must remember chromaffin cell tumor in the differential diagnosis.

The diagnosis should not be too difficult if the patient is seen in an attack. It is suggested that blood pressure, blood sugars, urinalysis, and blood potassium estimations be done on these patients at that time in an effort to establish the diagnosis. Pyelograms, flat plates of the abdomen, and palpation of the abdomen are also of value.

We should be extremely grateful to Dr. Allen for calling to our attention a condition which, while still rare, is being recognized with consistently greater frequency.

Dr. Victor E. Schulze, San Angelo: The contemporary concept of hypertension is that it is an inherited disease with an inevitable course caused by generalized arteriolar spasm of sympathetic nervous system origin. This fatalistic, unitary theory has been challenged. Some of us have found cause to repudiate the role of heredity. The neurogenic hypothesis, abetted and venerated by some surgeons, is being seriously controverted by many experimental investigators. All are essentially agreed that hypertension is not a disease but a symptom common to many diseases.

The essayist has presented an example of one of the diseases with which hypertension is associated. Characteristically, the pheochromocytomas as in the case recited, are associated with a paroxysmal type of hypertension, the intervening blood pressure being normal. This suprarenal sympathetic syndrome has been confused with other causes of paroxysmal hypertension which include the paroxysmal hypertension encountered in some cases of angina pectoris, paroxysmal hypertension associated with lymphosarcoma of the superior mediastinum, with carcinoma of the esophagus and paroxysmal hypertension occurring during the course of meningitis. Recorded cases of pheochromocytoma of long duration have presented moderate persistent hypertension between paroxysms and have simulated the encephalopathic crises of severe hypertension as well as the hypertensive diencephalic syndrome of Page. Several cases of adrenal pheochromocytoma have been reported in which the blood pressure elevation was constant and not paroxysmal. Thus although pheochromocytomas occur infrequently, they are important for the reason that the associated hypertension may be confused with the hypertension of other diseases, and because hypertension of this origin is curable.

UNDULANT FEVER*

L. P. HIGHTOWER, M. D.
FORT WORTH, TEXAS

A few years ago no information was obtainable from the current literature on the subject of undulant fever. Reference books and textbooks on medicine stated that undulant fever, or brucellosis, was a chronic infectious disease due to a specific organism and marked by recurring attacks of fever, enlargement of the spleen, swelling of the joints, neuralgic pains, profuse perspiration, and increasing weakness and anemia. We were also told that the endemic foci were located along the coast of the Mediterranean Sea and that the disease was rarely found in other parts of the world.

It was thought for a time that the disease was spread only through the agency of goat's milk. In 1886 Bruce discovered the causative organism and named it Micrococcus melitensis. Undulant fever began to be found in other localities and in places where there was no known possibility of infection from goats. In 1897 Bang discovered the causative organism of infectious abortion in cattle and named it Bacillus abortus. In 1918 Evans called attention to the fact that B. melitensis and B. abortus are very closely related in their morphological, cultural, serologic, and pathogenic characteristics. In 1924 it was established that, in this country, raw cow's milk was a common cause of the disease and in 1925 some sources of infection were traced to hogs. So now we have the three kindred types of organisms responsible for the disease known as undulant fever, or brucellosis, those derived from infected goats, cattle, and hogs. It is not unlikely that there are similar organisms found in other animals and also capable of producing this type of infection. The B. melitensis is thought to be the most virulent for man, though the bovine type is the most frequent cause of undulant fever. It is possible that the melitensis and suis groups can be transmitted through cattle to man, for the disease in man is most frequently acquired from the use of dairy products from infected cows. It is also possible that vegetables from fields fertilized with manure from infected herds may be responsible for some cases.

Though some cases were reported in the United States as early as 1904, these sporadic cases were regarded as clinical curiosities and undulant fever as a common infection was not

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recognized until 1926. During 1929 every state in the union presented positive evidence of the disease and in 1935 undulant fever began to be recognized as one of our public health problems. Cases have been discovered whenever and wherever a search has been made and when sufficient attention has been given to thorough routine examinations. Clinical recognition has progressed as physicians have become convinced of the prevalence of the condition and have developed a sense of diagnostic ability.

Though undulant fever is a disease of low mortality, it has a high morbidity and a strong tendency to chronicity. The onset is usually insidious and it is often impossible to determine when the disease began. There is an acute phase of the disease but it is rare for the physician to see or recognize a case until it has become chronic. What now and then are described as acute cases are probably recurrences of chronic conditions or reinfections. There is usually the history of a protracted period during which the patient has felt below par with repeated periods of well being. He has gone from one doctor to another in the vain attempt to find a satisfactory and permanent relief. He may have been diagnosed as having typhoid fever, rheumatic fever, malaria, or dengue fever. A large number have been treated for tuberculosis.

The symptoms of undulant fever are numerous but the chief ones are fairly constant. The first complaint is weakness and the ease of fatigue. This is frequently profound and incapacitating. It is almost a universal complaint and in some cases has extended over a period of several years. It is not the sort of fatigue which comes from exertion and it is not relieved by rest and sleep. The patient is constantly uncomfortable.

The fever of undulant fever is not high in the majority of cases and is not the most constant symptom. Numerous cases have been diagnosed in which no fever was ever detected and only occasionally do patients consult the doctor because of the presence of fever. Because fever is not the distinguishing feature, many writers have chosen to use the term brucellosis instead of undulant fever. In the majority of cases the temperature never reaches 100° F. One observer in 100 cases found the usual readings to be 99.4° to 99.8°. Unless the temperature is taken by one accustomed to using the thermometer and is taken frequently, the case of protracted, recurring fever is usually overlooked. There seems to be no special elevation in the afternoon, as the morning temperatures are frequently as high as those taken later in the day. The fever, when present, is irregularly undulating in type and there may be several rises during the waking hours. The irregular fluctuations are characteristic and help to distinguish this condition from malaria, typhoid fever, tuberculosis, empyema and other common infections. It is easily influenced by exercise and there may be a noticeable rise following very slight exertion such as the playing of a game or walking from one part of the house to another. Excitement or even the reading of a book which requires mental concentration often causes an elevation of temperature. The rise is temporary and a few minutes later is back to normal, often lasting no longer than ten or fifteen minutes. Another characteristic of the fever is its tendency to recur following several afebrile days.

A retired professional man began to show the typical symptoms of weakness and ease of fatigue early in January, 1939. In February he had what he thought was an attack of acute indigestion. When he failed to make a satisfactory recovery, a definite diagnosis of undulant fever was made. He had a positive agglutination, a positive skin test, and a high phagocytic response. He agreed to keep a record of his temperature taken at hourly intervals during each day. This was continued for a period of six weeks. A study of this temperature record gives us some interesting information. His temperature was never as high as 100° but varied from 97° to 99.5°, and the greatest variation on any one day was 1.6°. There was a rise above 98.6° on 80 per cent of the days and on the remainder the temperature remained at or below normal. It never was above normal all day. The number of rises above normal varied from once to four times per day. The number of forenoon and afternoon rises were nearly equal, but the majority showed rises in both the fore- and afternoon. The lower temperatures were usually recorded in the early morning hours. So irregular was the temperature that it was evident that if a reading were taken only occasionally or once or twice per day fever might never be detected. It was interesting to note the effect of even slight exercise. One day the temperature had been 98.6° all day. At 3:30 p. m. the patient went to a back room and played pool. He did not play strenuously and only played twenty minutes. At 4:00 p. m. the temperature was 99.2°. Thirty minutes later it was normal. The least variations from normal were when he remained in bed or was sitting quietly in his room. He continued to have fever at irregular intervals throughout the summer and when last heard from in January of this year, fever almost invariably followed exercise. During most of this time his appetite was satisfactory, he lost little in weight, and his general appearance was good. He became very nervous, and this with his fever and weakness constituted the chief signs of his illness.

One of the most constant of the later complaints is nervousness. The patient is noticeably irritable and becomes unsociable. He feels generally depressed and is very resentful that his condition is not appreciated. He dislikes to be told that he looks well. He loses interest in the things about him. He is called a neurotic or a neurasthenic and in a number of instances this is the only diagnosis which has been made. One observer declares

that 75 per cent of all the undulant fever patients he has encountered came to him with the diagnosis of neurosis. The psychoneurosis is at times so pronounced that it leads to a severe nervous disorder and it is not uncommon for a patient to contemplate suicide. The subjective physical and mental symptoms may be identical with those of neurasthenia. Some physicians find that they have treated patients for months or even years for neurasthenia before a satisfactory diagnosis of undulant fever was made. One writer admits that one of his undulant fever patients was treated by him for neurasthenia for nineteen years.

There are numerous other symptoms. There is often profuse sweating, especially at night. This is marked by a peculiar, sour, pungent odor which does not resemble that of any other condition. Gastro-intestinal complaints are frequent and may include anorexia, nausea, vomiting and constipation. The patient may complain of general abdominal soreness and cramping which may lead to an operation for chronic appendicitis without relief of symptoms. There usually are complaints of general or localized pains such as in the back which may become intense. There are muscular and joint pains often with swelling and resembling rheumatic fever. In some cases sciatica is a prominent symptom and attacks of neuritis occur in probably three-fourths of the cases. A severe pain in the back of the neck is often an annoying symptom. Headaches are frequent. There is often marked insomnia which leads to the common use of somnifacients. One patient seen by us recently had not slept in months without the use of phenobarbital. In spite of all of these complaints there is usually not a marked loss in weight. When there is a weight loss it is usually due to fear or a willful avoidance of food. Some writers describe the presence of painful subcuticular nodes on the arms and digital phalanges. Pustular, papular and roseolar rashes have been observed during various stages of the disease. Respiratory symptoms are not typical but are frequently present and are important because they are confusing diagnostically. In spite of the severity and the persistence of the symptoms, the patient rarely has the appearance of one seriously ill.

The physical findings in undulant fever are scarce and every writer on the subject emphasizes the difficulty of diagnosis. The patient is inclined to be quiet and shows evident weakness. There is profuse and constant perspiration. There may be rales in the chest which are suggestive of pneumonia or bronchitis and call for an x-ray examination. Beaty studied ninety-two undulant fever patients and found 25 per cent of them had pulmonary symptoms and eighteen had pulmonary changes as shown by x-ray. Rutherford has found that there are occasionally ocular manifestations with papilledema and an increase in the spinal fluid pressure and cell count. The spleen is usually palpable and tender, and the liver may be enlarged. Some of the patients have tender and swollen joints. A clinical diagnosis is usually made as other possible conditions are ruled out. The prime features of weakness, sweats, fever, and nervousness are of such a general nature that they are almost useless in making a differential diagnosis. Undulant fever must be differentiated from Rocky Mountain spotted fever, tularemia, typhoid fever, malaria, bronchopneumonia, rheumatic fever, tuberculosis, pyogenic septicemia, neurasthenia and Hodgkin's disease. Most of these can be eliminated by a careful study of the history and clinical symptoms and then one must turn to the laboratory for confirmatory evidence.

The urine is usually negative but occasionally there is a trace of albumin. The blood count, especially in the chronic condition, shows a mild secondary anemia. There is usually a leukopenia and a mild relative lymphocytosis. The sedimentation rate is not affected. The basal metabolic rate is usually near normal.

Several diagnostic procedures are in general use. A positive blood culture is conclusive evidence of the infection; however, technical difficulties and the prolonged incubation period make this method impractical as a quick diagnostic test. The agglutination test is the oldest and it is generally agreed that a positive agglutination is good evidence of the disease, but positive agglutinins may not be demonstrable for months. A negative agglutination does not prove freedom from infection, but the agglutination test forms one link in the chain of evidence. Skin tests are done with a suspension of the killed organisms or with Huddleson's brucellergin. A positive test, as indicated by erythema and induration, is evidence of sensitization rather than active infection. The opsono-phagocytic test is made with fresh blood and a suspension of the living organisms of the B. abortus. By a study of the stained smear it is possible to determine the phagocytic power of the patient's blood cells. A positive diagnosis cannot be made from any of these tests and it does not now appear that laboratory procedures can ever be accepted as a substitute for a complete clinical study. Calder suggests that it is good practice to perform all three of the tests and to interpret the results in the light of the clinical picture.

Our knowledge of the pathology of the disease is not very exact, and the autopsy findings are not consistent because of the scarcity of autopsy materials and the variations in the severity and course of the illness. There appears to be no particular organ or tissue peculiarly affected by the causative organism or its toxins but the most constant finding is an enlarged spleen. In the examination of the spleen some investigators have found a striking similarity to the findings in Hodgkin's disease.

The first consideration in the therapy of undulant fever should be directed to prophylaxis. The chief source of infection is infected cows and the disease is most frequently transmitted through milk and other dairy products. Epidemics have always subsided when the source of infection has been suppressed. The disease has not been known to be transmitted from one individual to another. The thorough pasteurization of milk and milk products before they are made into butter, cheese and ice cream afford additional protection. No cases have ever been traced to milk which has been properly pasteurized. Prophylactic vaccination has not been found satisfactory. The treatment of the infection is largely symptomatic as in any protracted fever. The results of the use of drugs for curative purposes have not been encouraging. The patient should have the benefit of adequate rest and diets. Tonics have been found beneficial in counteracting the anemia and maintaining the patient's strength. Physiotherapy and psychotherapy are useful in combating the neurasthenic tendencies. Sedatives are helpful when indicated and hypnotics are necessary in the majority of chronic cases. The most generally used treatment and that with the best results is vaccine given intravenously and subcutaneously. This form of treatment is being perfected and more reliance is being placed in it. Calder claims that the use of Foshay's antigen has caused the arrest of the infection in a gratifying percentage of his patients. Neoarsphenamine and sulpharsphenamine have not been successful. Methylene blue and colloidal metals have failed to control the disease. Quinine, bismuth, arsenic, and salicylic acid have all been used without effect. Sodium cacodylate is beneficial when the nervous symptoms are prominent. According to Calder, the duration of treatment can be considerably reduced by the intravenous administration of nicotinic acid but it is advised that this method of treatment be restricted to those patients in whom vaccine has proven ineffective after a trial. Sulfanilamide and its compounds have, of course, been used both alone and in combination with other forms of treatment but not with uniform success. Some have reported a prompt suppression of the fever by its use while others have given the drug to the point of toxicity without beneficial effect. The most noticeable effect from its use seems to be the increase of the patient's phagocytic response, and when this has been obtained further administration is useless. Artificially produced hyperpyrexia has been tried with favorable results in a few cases of the chronic type.

The prognosis is one of the most difficult problems connected with undulant fever. There seems to be no way by which one can indicate the length of time that this disease will continue. The prospect of recovery is usually good, though the possibility of a spontaneous cure is remote. The disease usually lasts from three to eighty-eight weeks with an average of twenty-eight weeks. It has been known to exist for a number of years. The mortality rate is only about 2 per cent but from the standpoint of its prolonged course and the resulting invalidism it is a more serious disease than the death rate would indicate.

SUMMARY

Undulant fever is becoming one of our common maladies and in its chronic form is often difficult to distinguish from neurasthenia. The symptoms are so general that unless the physician is painstaking and alert the diagnosis will be overlooked. The laboratory tests can be of service only when they are studied together with the clinical history and symptoms. The temperature, when taken frequently, may present a typical curve. The temperature is easily influenced by physical, emotional and mental factors. The symptoms of weakness, and nervousness are the most constant and pronounced of all. Any patient with a persistent, low grade fever and a complaint of weakness and with marked neurotic symptoms should be studied with the possibility of undulant fever in mind. The disease has a marked tendency to become chronic with the possibility that it will result in pronounced inefficiency and invalidism. The sources of infection are well known but the methods of prevention need to be more strictly employed to be effective. The public health problems now seem to be the eradication of Bang's disease from all dairy herds and the prevention of reinfection from all possible sources and the further insistence on the sale and use of only pasteurized milk and other dairy products. Diagnostic procedures are admittedly insufficient and therapeutic measures are far from adequate.

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Box 1719.

ABSTRACT OF DISCUSSION

Dr. T. D. Young, Roscoe: No discussion of undulant fever or brucellosis is complete without mentioning the well known clinical acute type. Dr. Hightower has omitted a detailed discussion of this type because the diagnosis is seldom missed.

The chronic type as he has pointed out is a very definite infection, which is being recognized more each year. This is shown by the Public Health Reports of 112 cases in 1927 against 2,497 cases in 1937—an increase of 2,229 per cent in ten years. In February of this year Parsons and Poston reported seven thousand tests in school children with 9 per cent positives. These children with positive tests had vague complaints the authors ascribed to brucellosis. Such a widespread disease is a major health problem.

Many interesting problems are yet to be worked out. One is an easy, accurate and reliable test for the infection. As long as the blood cultures and blood tests are so difficult, they will be used very little in general practice, and the general practitioner should diagnose 95 per cent of the cases. Another problem is the relation of brucellosis and Hodgkin's disease. I had a patient with positive brucellosis tests, who died with Hodgkin's disease. There were four cases reported this year in which the pathological diagnosis was Hodgkin's disease. All four had negative skin and agglutination tests. One had been examined at an earlier time and had positive brucellosis tests. But brucella organisms were grown on lymph node cultures in each case. The question arises as to whether we are dealing with the same infection in different stages.

Our only hope to get anything done with brucellosis is to arouse interest in its diagnosis. Any person without a definite positive diagnosis—especially all neurotics—should be tested for brucellosis. When this is done our diagnoses will improve, interest will be aroused, pasteurization of milk will be increased, and the incidence of brucellosis will be reduced.

In the Southwest—"where men are men"—and 10 per cent of the cows are secreting infected milk, we must be on our guard for this disease. Suspicion should be our most valuable weapon. We must suspect everyone.

The best treatment is still prevention. It is only by public health education in the clubs, homes, schools, and so forth, that we can ever control such a chronic disease. Most observers believe there is more undiagnosed brucellosis than there is syphilis in the United States.

THEOPHYLLINE AND PROPADRINE (PADROPHYLL) IN THE TREATMENT OF ALLERGIC INDIVIDUALS*

A. H. BRADEN, M. D.
HOUSTON, TEXAS

During the fall of 1936, I began to use propadrine hydrochloride as an adjunct in the treatment of ragweed hay fever. As is well known, propadrine is the trade name of phenyl-propanol-amine hydrochloride. It is an amine and is an analogue of ephedrine. I was favorably impressed by the drug since, on the whole, it controlled very satisfactorily symptoms in preseasonally pollen-treated patients who needed additional help for greater comfort, as well as controlling symptoms in untreated or coseasonally treated cases.

In my experience propadrine is as efficacious as ephedrine in the relief of symptoms, minus the side effects of ephedrine, which are quite unpleasant at times if not combined with a sedative.

During the fall of 1938, I began to use a tablet composed of ½ grain of propadrine and 2 grains of theophylline for the same purpose for which propadrine had been used previously. The tablets were furnished generously by the manufacturer and are now distributed to the drug trade under the trade name of padrophyll.

Theophylline (or aminophylline) has been used for some time in the treatment of asthma with beneficial results in cases where adrenalin fails to give relief, or as an adjunct to adrenalin. The modus operandi by which this drug produces relief in asthma is not as yet understood. Theophylline has been used as a diuretic and as a remedy in cardiovascular conditions. It belongs, together with caffeine and theobromine, to the group of xanthine diuretics.

I became interested in whether a combination of propadrine and theophylline might be more efficacious than propadrine alone. This report is based on a study made to throw some light on this question.

One hundred and twenty-two patients were

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treated who received padrophyll. These cases were divided into the following groups: seasonal hay fever, 46; asthma, 30; allergic rhinitis (perennial), 33; urticaria, 9; angioneurotic edema, 4. The ages of the patients ranged from 6 to 78 years. There were 71 females and 51 males in the group.

The seasonal hay fever cases were practically all sensitive to ragweed pollen as the chief offending agent. The asthma cases showed various etiological factors and included sensitivity to food, pollen, bacteria, epidermals, etc.

Patients were instructed to take one tablet every three or four hours, if needed to control symptoms. This had been my plan when propadrine was used alone and was decided upon for padrophyll until more experience could be gained with the remedy. In practically all cases it was used for symptoms present or for anticipated symptoms.

Many of the ragweed-sensitive patients had previously received propadrine alone or ephedrine with a barbiturate, and thus were in a position to compare the two drugs. From reports received from these patients the impression gained was that padrophyll relieved their symptoms better than did propadrine alone or ephedrine. In the middle of the ragweed season of 1939, my supply of padrophyll tablets became depleted, and patients were given propadrine alone or ephedrine with a barbiturate. The majority of the patients reported that they felt that padrophyll was superior to either of the above named remedies.

Since the padrophyll was missed by these patients, and since I did not feel like imposing too freely on the good will of the manufacturer who had supplied me with padrophyll in the past, it was decided to prescribe two capsules: one containing 2 grains of theophylline, and the other containing 3/8 grain of propadrine. Propadrine is distributed in capsules only, and it was thus easier simply to add the extra capsule of theophylline than to open the propadrine capsules and add the theophylline. Contrary to expectations, patients reported that these two capsules did not have the same effect as the padrophyll tablet. What the explanation of this is I do not know, unless it was due to a difference in the rate of absorption of the two drugs in separate capsules.

After this experience I decided to combine the two drugs in one capsule. This combination was more trouble to the pharmacist, but proved its value in that patients reported much better effect from the two drugs in one capsule. This had not been the case when they were given in two capsules.

The asthma patients as a whole were relieved rather satisfactorily by padrophyll alone, or in conjunction with adrenalin or aminophylline intravenously. In one case of asthma padrophyll proved quite valuable. This patient was a woman 78 years of age, who for three months had persistent asthma of bacterial origin in a severe form. Adrenalin gave her only transitory relief; histaminase gave her no relief at all. The only relief she got was from 7½ grains of aminophylline intravenously injected twice daily. This procedure did very well, but her veins were small, and it became more and more difficult to give her relief by this method. She was given a padrophyll tablet every four hours, and these controlled her asthma rather satisfactorily.

It was difficult to evaluate the results in the cases of allergic rhinitis. Here the symptoms are usually variable, with a tendency to chronicity with attendant refractoriness to treatment, so that the value of any drug that gives only temporary relief is difficult to appraise. Indeed, it has been my experience that many of these patients will develop a tolerance to any one drug when given over the period of time that the drug usually has to be given, necessitating changes in the therapeutic armamentarium from time to time. It was my impression that padrophyll did as well in these cases as ephedrine or propadrine, but there still remained much to be desired in the way of adequate relief in many instances.

Of the thirteen cases of urticaria and angioneurotic edema, only one patient received no aid at all from padrophyll. The remainder were relieved more satisfactorily over longer periods of time than with propadrine alone.

On the whole padrophyll was very well tolerated. Only six patients showed some unpleasant symptoms after taking the drug. These unpleasant symptoms consisted of nausea without vomiting in four cases of ragweed hay fever, and in two cases of perennial hay fever. In addition to nausea, one patient complained of bladder irritability. No complaints of insomnia were received.

Blood pressure does not seem to be affected by the combination of propadrine and theophylline. No accurate records of blood pressure readings were taken, but from time to time readings were taken before and after the drug was given, and no differences of significance were noted. Only one patient with hypertension in this series was treated. This patient was a man 50 years of age who had angioneurotic edema; his blood pressure showed little change from padrophyll therapy.

No conclusions can be drawn from such

a report as this. My impression, based on the degree of relief patients experienced, is that padrophyll gives a more complete and longer relief than propadrine alone. Padrophyll seems to relieve asthma, seasonal hay fever, and urticaria better than it does allergic rhinitis.

1910 Crawford Street.

SQUAMOUS CELL CARCINOMA OF THE ANORECTAL REGION*

JACK G. KERR, M. D.
DALLAS, TEXAS

Malignant lesions of the terminal portion of the intestinal tract are so commonly adenocarcinomatous in nature that the numerous published accounts of cancer in this situation usually reflect the clinical and pathological characteristics of only this particular type of tumor. Because of this our ideas are very well established concerning the relative degree of malignancy, the symptoms and prognosis of adenocarcinoma of the anorectal region; while these features, as related to other pathological types of anorectal carcinoma, are seldom studied because of the difficulty in collecting a sufficiently large group of cases to comprise an entity. Malignant lesions presenting variations from the adenocarcinomatous type occur as squamous cell and basal cell carcinoma, both correctly included under the term epidermoid carcinoma. Malignant melanoma and tumors containing both glandular and squamous cell cancer in separate areas of the same growth are seen, as are the occasional sarcomatous and angiomatous lesions. Other than adenocarcinoma, by far the most common of these new growths, is one which arises from, or presents the characteristics of, protective epithelium and is, therefore, of the squamous cell type. It is known also as acanthoma, keratinizing and prickle cell carcinoma, and by common usage is the type often implied when referred to as epidermoid carcinoma.

Approximately 5 per cent of all anorectal cancers are of the squamous cell type, but for a more accurate figure by which to recall their incidence, we like to think of them as accounting for about 1.5 per cent[2] of all malignant lesions arising in the terminal 24 cm. of the large bowel, including the anal canal, since this is the usual distance through which the bowel is visualized during all routine examinations.

While a Fellow in the Mayo Foundation for Medical Education and Research, ninety-two cases of purely squamous cell cancer of the anorectal region were studied with the idea of determining their average degree of malignancy and, further, to correlate the individual grade with the final outcome of the patient in such a manner that a comparison could be made with an available result obtained from a similar study of adenocarcinoma in this location. Such clinical observations as varied from the usual findings in the average case of carcinoma of the rectum were also recorded.

The average age of the patients comprising this group was 56 years, which varies little, if any, from the average age at which rectal cancer in general is seen. An interesting distribution as to sex was observed in this series with thirty-five of the ninety-two patients being males and fifty-seven of them females, comprising a percentage ratio of 38 to 62. This is essentially the reverse of the sex incidence of adenocarcinoma of the rectum, approximately 65 per cent of the patients with this condition being males. Any reason for such a sex distribution of squamous cell cancer is not apparent, and this incidence is in quite a contrast to that given for squamous cell carcinoma in other locations, when only organs common to both sexes are considered. In such studies, for example, Broders[1] has reported the following distribution according to sex: of the lip, males accounted for 97 per cent of 537 cases; of the skin, males made up 80 per cent of 256 cases, and in the urinary bladder 80 per cent of 120 patients were males.

With its point of origin in the anal canal, the presence of squamous epithelium lining the canal makes the origin there, of squamous cell carcinoma, seem quite logical and explainable. It does not, however, explain the origin of those cases of squamous cell carcinoma arising above the level of, and having no intimate connection with, the squamous epithelium at and below the pectinate line. The development of a squamous cell cancer is not unusual in organs where columnar epithelium is found normally and in which an adenocarcinoma would be the type of malignancy expected to occur.[1] Explanation of such an occurrence is usually based on the process of metaplasia, wherein the regenerative cells, which under normal circumstances produce columnar epithelium, produce squamous epithelium instead. Several instances of squamous cell carcinoma are recorded[7 6 9] as occurring in the bowel as high as the sigmoid, and such a case was observed in this series. This, however, is not their usual location and by far the majority of these lesions, regardless of whether their precise point of origin is above or below the

*From the Department of Proctology, Baylor University, College of Medicine, Dallas, Texas.
*Read before the Section on Surgery, State Medical Association of Texas, Dallas, May 14, 1940.

pectinate line, will be located at or near that level invading the tissues surrounding the lower rectum and anal canal.

The relation between preexisting benign lesions and the subsequent development of cancer in the anorectal region is controversial, and the opinion of various writers concerning it is frequently based entirely on some personal observation. Therefore, it is not uncommon for one author to say that the presence of benign lesions is largely coincidental, while another will think that fissures, ulcers or some chronic inflammatory change often precedes anorectal carcinoma. This latter observation is seen not infrequently where an active anal fistula has preceded by many years the development of cancer in its tract. The common occurrence of lesions at or near the mucocutaneous junction of the rectum and anus, which often are allowed to act as a source of chronic irritation over relatively long periods, causes one to speculate as to why squamous cell cancer is not even more frequent in this location. Certainly it occurs less commonly than the same type of carcinoma at the mucocutaneous junction on the lip.

Of these ninety-two cases we were able to grade, by Broders' method, the specimens removed from eighty individual tumors. These sections were taken either as a biopsy or from the tumor after surgical removal and in several cases from both sources. Table 1 shows the number of patients in each grade group, together with the percentage of the total each group comprises.

TABLE 1.—*Grades of Squamous Cell Anal Carcinoma.*

Grade	No. Patients	Per Cent	
1	4	5.0	
2	17	21.2	26.2
3	41	51.3	
4	18	22.5	73.8
	80		100.00

It is seen that the two highest grades account for 73.8 per cent of the total number of patients. This is a considerably higher proportion in the more malignant grades than have been reported from large series in which squamous cell cancers from all parts of the body were studied.[1 8] It is generally understood, however, that the average degree of malignancy is higher in squamous cell cancer occurring in some organs than it is in others. The cervix uteri, for example, is likely to harbor a tumor of a higher grade of malignancy than is the skin. Squamous cell carcinoma of the anorectal region is, on the average, a tumor of high grade malignancy and is comparable in this respect to the same pathological type occurring in the cervix uteri, the vagina, the esophagus and the nasopharynx.

Clinically there is usually some difference between the chief complaint of a patient having a squamous cell carcinoma of the anorectal region and those symptoms that we have come to regard as typical under the broad term of carcinoma of the rectum. This difference comes from the location of the tumor in the average case rather than from any difference in pathological type. Being situated either in the anal canal, by virtue of its origin from the squamous epithelium there, or in most instances low in the rectum, pain is a much more common complaint than it is in the average case of adenocarcinoma. In fact pain, either initiated or aggravated by the passage of a stool, is given as the chief complaint for which the patient seeks relief, as often as is the passage of blood; although a few more patients will include bleeding than pain as a secondary symptom in their history. Of the original ninety-two cases in this study, eight were recurrent lesions when first seen and, therefore, were omitted in so far as primary symptoms were concerned. Of the remaining eighty-four patients, 65 per cent of them had as the single chief complaint for which each sought relief either pain, bleeding or the palpation by the patient of a nodule. This latter finding, the complaint of seventeen patients, is worthy of note and should always be given consideration by any examining physician, especially if of recent development. Tenderness of the nodule may be present, but in none of these cases was it extreme. Some change in bowel habit, usually complained of as "increased constipation," was not an unusual symptom, although diarrhea, or rather the frequent desire for stool with the passage of mucus and blood, so commonly seen in carcinoma of the rectum, was complained of by only one patient.

Lesions commonly observed in practice, for which relief was sought by several patients in this group, and which by name at least are regarded as benign, were ulcers and abscesses, the latter with or without fistula formation. Carcinoma may, of course, develop in an anal fistula; however, this is quite uncommon. It can be considered to have done so only when the fistula has antedated the development of the cancer by a period of time over which the malignancy could not have been compatible with life. A more probable occurrence, and the common explanation of the not infrequent association of the two processes, is that the pararectal abscess is initiated by the already existent carcinoma and with subsequent incision or perforation fistula formation results.

Surgical procedures for the common anorectal diseases preceded the diagnosis of cancer in many of these eighty-four cases. Condemnation of this practice cannot be as vigorous, however, as it can when cancer is present in the upper rectum or sigmoid, since in several instances the diagnosis was apparent only on microscopic examination of tissue which grossly appeared benign. In several other instances the patient presented as chief complaint a postoperative wound which had "failed to heal," with no accompanying information that the tissue excised had been suspected of being or examined for cancer. Subcutaneous and submucosal nodules about the anus and rectum, as well as ulcers or postoperative wounds that "refuse to heal," should be regarded with suspicion sufficiently great that a biopsy be advised without hesitation, if the reason for their presence is not readily apparent. It goes without saying that any tissue removed surgically should always be examined microscopically.

In two other studies of squamous cell carcinoma of the anorectal region, the degree of malignancy and the prognosis were based on gross and microscopic characteristics of the individual lesion and the lesions were classified respectively by the descriptive terms of ulcerative or nodular and discrete or diffuse.[4, 6b] The lesions comprising this study did not lend themselves well to these classifications, and grading (Broders') seemed, under the circumstances, to furnish a more equitable basis for comparing the degree of malignancy and in turn the prognosis with that of adenocarcinoma of the rectum. Studies of the prognosis of carcinoma are frequently based on the outcome of a group of patients with cancer over a period of five years. This period of time, likewise, was taken as the basis of comparison for this group. For a patient to be included in this "five year group," the microscopic diagnosis of squamous cell carcinoma of the anorectal region must antedate this study by five years; and, if the patient lived five years or longer, actual follow-up information must cover completely the five year period following the diagnosis. Fifty-six patients comprised the group that could be counted on this basis. At the end of five years, forty of them were dead and sixteen, or 28.5 per cent, were living. This is not to be interpreted as 28.5 per cent "cures" or even as that percentage of "five year cures," because several of these patients died of their original disease after the five-year period ended, and a few others had local recurrences which had not produced death at the end of the five-year period.[3] This figure of 28.5 per cent of patients who survived five years corresponds very closely with the 28.9 per cent of patients found by Laird[5] to be living at the end of five years when a group of grade three cancers of the rectum, consisting almost entirely of adenocarcinomas, was studied. Inclusion of a patient in Laird's group was dependent on approximately the same factors as given above.

Using the fifty-six patients in the so-called "five-year group," as qualified above, an attempt was made to correlate the outcome of each patient at death or at the end of five years with the grade (Broders' method) of the tumor which the patient had. Before this was done, twenty-two patients were excluded because the cancer was considered "inoperable" when first seen, thus making

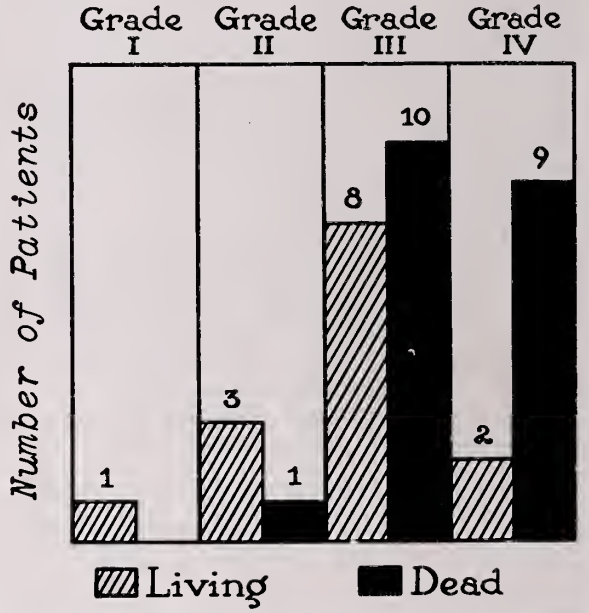

Chart. 1. Graph showing the outcome of thirty-four patients who had squamous cell carcinoma of the anorectal region. Each case was followed at least five years.

the intent of treatment palliative rather than curative, or the patient refused treatment of any type. This left a total of thirty-four patients for this study, each of whom had some type of treatment aiming at cure. The results are given in chart 1 which shows graphically the progressively increasing proportion in the number of deaths to the number of patients living at the end of five years, as the grade of the lesion increases from 1 to 4. While the total number of cases represented by the table is small, the percentages comprising the two lower grades and the two higher grades are fairly consistent with the ratio between these respective groupings when calculated from the total of eighty cases studied for grading.

CONCLUSIONS

1. Squamous cell carcinoma in the anorectal region is, on the average, a tumor of high grade malignancy when compared with the same pathological type in other locations.

2. It occurs more commonly in the female by approximately the same ratio that adenocarcinoma of the rectum predominates in males.

3. Pain, due to the location of the tumor, is more commonly a symptom than it is with adenocarcinoma.

4. The life expectancy of the average patient is comparable to that of a grade three adenocarcinoma of the rectum.

5. Grading by Broders' method affords the best criterion available for establishing the degree of malignancy and this factor should be taken into consideration in any estimate of prognosis.

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710 Medical Arts Bldg.

ABSTRACT OF DISCUSSION

Dr. Curtice Rosser, Dallas: Dr. Kerr has called attention to the fact that about 5 per cent of all rectal cancers are of the squamous cell variety, which definitely justifies the careful study he has made of this type of tumor. Cancer in the anal canal —the narrow terminal inch of the large bowl—requires biopsy more frequently than malignancy in any other portion of the intestine, because it is frequently impossible to determine by inspection whether a tumor in this locality is an adenocarcinoma or an epthelioma and because cancers of this canal are so frequently implanted on old benign lesions.

The essayist states that the relation between preexisting benign lesions and the subsequent development of cancer in the anorectal region is controversial, and that the opinion of various writers concerning it is frequently based entirely upon some personal observation. He feels, moreover, that while carcinoma may develop in ulcers, abscesses or fistulas, that this is uncommon. With this conclusion I am in entire disagreement.

When I reported, at a meeting of the American Medical Association in 1930, that we were observing a rather large group of individuals with cancer of the anal canal, which had apparently been implanted in and on fistulas, hemorrhoids and other chronic anal lesions, Dr. Louis A. Buie, Chief of the Proctologic Service from which Dr. Kerr's material has been drawn, expressed a similarly skeptical attitude. However, three years later he and Brust went over the records of fifty-one cancers of the anus and found that thirty-four of these had benign lesions associated with the neoplasm which data, he stated, supported the hypothesis previously advanced by me that chronic infection is a predisposing cause of anal carcinoma. Six years ago, at the Southern Medical Association, I reported twenty-five cases of cancer of the anal canal and called attention to the fact that in twenty-one of the patients some benign condition was found in intimate association with the malignant process, fistula being present in eleven, hemorrhoids in eight, polyps in one and chronic cryptitis in one. In thirteen of these cases the benign lesion had antedated the malignant process sufficiently long that we had every reason to believe that the malignant process was induced by the chronic irritation present over a number of years. Since that time, numerous reports have occurred in the literature confirming this relationship.

My experience confirms the observation made by Doctor Kerr that squamous cell carcinoma may be found above the dentate line. This occurred in four of the eight squamous cell cancers included in the twenty-five patients just referred to. Moreover, we have noted that adenocarcinoma may be present below and external to the dentate line, either by extension from the mucosa at the dentate line or from malignant degeneration of the vestigial glands described by Hermann in 1880 and more recently by Tucker and Hellwig of Wichita, Kansas. The anal canal, therefore, may be invaded by either squamous cell or columnar cell cancer, both above and below the dividing dentate line, which accentuates the importance of biopsy in this area.

POTASSIUM SALTS AND HAY FEVER

Potassium salts have no practical value in the treatment of hay fever and seasonal asthma, Simon S. Rubin, M. D., Abe L. Aaronson, M. D., Morris A. Kaplan, M. D., and Samuel M. Feinberg, M. D., Chicago, report in *The Journal of the American Medical Association* for June 15. Their conclusions are based on studies of results of such treatment in 153 victims of hay fever and asthma. The symptoms of a few of their patients, the authors state, were made worse by the salts.

"The effect of such salts in other allergic conditions is highly questionable," the Chicago workers state. "Reports of treatment results in hay fever should be received with skepticism unless they bear the earmarks of evaluation by methods based on the relationship of the symptoms to daily, seasonal and geographic fluctuation of the pollen counts."

VITAMIN-FREE FOODS FOR RESEARCH

A recent announcement by the Research Laboratories of the S. M. A. Corporation reveals that they are now in a position to provide vitamin-free casein and other vitamin-free foods for experimental purposes to researchers who have previously been obliged to manufacture these items for private use.

For many years the S. M. A. Corporation has been producing these foods exclusively for use in their laboratories. Now, with the expansion of their own facilities and the realization of the convenience to others engaged in laboratory work this offer is made to provide vitamin-free diets at an exceptionally reasonable cost. Quantities of one, five, ten or 100 pounds or more may be ordered directly from the Research Laboratories, S. M. A. Corporation, Chagrin Falls, Ohio.

HEMORRHAGES IN LATE PREGNANCY AND EARLY PUERPERIUM*

J. E. KANATSER, M. D., F. A. C. S.
WICHITA FALLS, TEXAS

Any abnormal obstetrical bleeding demands prompt and careful investigation. Of the many complications that may arise during pregnancy, labor or the puerperium, none requires more prompt or skillful treatment than hemorrhage, in order to prevent a tragedy.

Of the hemorrhages of late pregnancy, two types are of special importance—those due to placenta praevia and those due to abruptio placentae.

PLACENTA PRAEVIA

In considering placenta praevia, we immediately visualize painless, causeless uterine bleeding in the last trimester of pregnancy, and we are aware of the three varieties—marginal, lateral and central, depending upon the amount of the placenta presenting at the internal os of the cervix.

In any discussion of the treatment of placenta praevia, we readily recall the three commonly used methods for this obstetrical complication, namely, rupture of the membranes, the insertion of the bag, and cesarean section. The type of treatment will depend upon several factors, such as the degree of placenta praevia, whether or not the patient is in labor, the amount of dilatation of the cervix, the condition of the mother and baby, and whether the patient is in the hospital or at home. I personally believe that every patient with placenta praevia should be treated in a hospital; surely the patient with the central type praevia is too great a risk for home treatment. However, the patient with marginal or partial placenta praevia may occasionally be treated with success in the home by rupturing the membranes and permitting the presenting part to act as a compress against the placenta to control or check the hemorrhage. Following this, the patient may be permitted to deliver spontaneously, provided the bleeding is not too pronounced. Willett's forceps procedure appears to be replacing Braxton Hicks' version in the management of certain cases of placenta praevia; I have never used either of these last two methods.

In a hospital, the treatment of placenta praevia will vary with many conditions. If the patient is in labor and there is complete dilatation and effacement of the cervix, the baby should be delivered by forceps, or version and extraction, depending upon the station or descent of the fetal head, and also depending upon the degree of hemorrhage, the condition of the patient and the frequency and severity of the uterine contractions. If the cervix is not completely dilated, and there is not much placental tissue over the internal os, rupturing the membranes may suffice. It may be necessary to insert a bag after rupturing the membranes. The bag should be sufficiently large, so that after it is forced through the internal os, there will be enough dilatation to permit passage of the fetal head, or easy version and extraction. A patient with a bag should be kept in the delivery room until delivered, and everything should be in readiness for quick delivery by forceps or version and extraction in case immediate hemorrhage is pronounced after delivery of the bag. Some obstetricians are using Willett's forceps in preference to the bag in marginal placenta praevia.

Cesarean section perhaps offers the most successful method of treatment for the more severe types of placenta praevia, provided the diagnosis has been made early and the patient is not infected from attempts at delivery from below.

According to DeLee, four objects should be accomplished in the treatment of placenta praevia: the hemorrhage should be stopped, the uterus emptied, hemostasis insured and anemia combated. The most certain way to empty the uterus, control the bleeding during delivery, and prevent postpartum hemorrhage, is usually abdominal cesarean section. This operation, combined with blood transfusions before, during or after the section, perhaps yields better results than any other procedure in the treatment of placenta praevia, and this is especially true when we are dealing with the central type of praevia.

ABRUPTIO PLACENTAE

Abruptio placentae, or premature separation of the placentae, is usually characterized by a sudden onset of abdominal pain, uterine hemorrhage, which may be either external or concealed, and frequently the uterus becomes rigid, the so-called "board-like" rigidity. Symptoms of shock appear early in cases with marked separation and profuse blood loss.

The treatment of abruptio placentae depends primarily upon the degree of placental separation and the amount of hemorrhage present. These patients are usually classified as having mild and severe degrees of placental separation. The patient with a mild degree of placental separation may be treated conservatively, provided there is no pelvic disproportion present. However, it is important to hospitalize even the patients with symptoms of mild or small placental separation and hemorrhage, because they may

*Read before the Section on Obstetrics and Gynecology, State Medical Association of Texas, Dallas, May 14, 1940.

suddenly change from a mild to a severe case. Conservative treatment for the woman with a small placental separation and mild hemorrhage is essentially the same as that for any normal spontaneous delivery, with the exception that she should be more carefully observed for indications of additional placental separation. This means frequent blood pressure readings, abdominal examinations to detect any sudden change in the size of the abdomen, and observation of the pulse rate and volume. If careful observation of such a case reveals progress of labor and no increase of hemorrhage, the patient should be permitted to deliver normally.

Irving of Boston has shown that excellent results can be obtained by non-operative treatment of abruptio placentae. Many patients with mild degrees of placental separation have been successfully treated by rupturing of the membranes, applying a tight abdominal binder and the giving of small doses of pituitrin. However, if the uterine hemorrhage appears to be increasing, as evidenced by decrease of blood pressure, increased size of abdomen, increased pulse rate, thirst and other symptoms, no intravaginal method of delivery should be considered, unless the condition of the cervix is ready for immediate delivery by forceps or version and extraction. If the cervix is not completely dilated and the placental separation and hemorrhage appear to be severe, or seem to be increasing, the uterus should be emptied by cesarean section. The uterus should be amputated if it is of the couvelaire or apoplectic type, by the so-called Porro section. Blood transfusions before, during or after section, are invaluable for the patient with a premature separation of the placenta.

HEMORRHAGES IN THE EARLY PUERPERIUM

"Postpartum hemorrhage is still one of the greatest causes of maternal mortality and morbidity in this country. Excessive bleeding following delivery is associated so intimately with the management of the third stage of labor that it is impossible to discuss postpartum hemorrhage adequately without some consideration of the physiology and management of the placental stage."[23]

Baudelocque distinguished separation from expulsion of the afterbirth, and this difference should be kept in mind constantly during the conduct of the third stage of labor.

Most observers are in accord as to the methods of separation and expulsion of the placenta. According to Williams, periodic uterine contractions begin again, though with a great deal less force, soon after the birth of the baby. The contractions cause a thickening of the uterine wall and a marked decrease in the size of the uterine cavity. The placental site becomes proportionately lessened. This materially causes compression of the placenta. With continued contractions of the active uterine musculature against the passive placental tissue, separation takes place between the two, when a maximum degree of placental compression has been reached. As soon as there is slight separation of the placenta from the decidua, hemorrhage develops in the first area of separation. This blood acts as a fluid wedge, and with each contraction, it is forced between the layers and hastens the remainder of the separation.

When the process of separation has continued until the placenta has been completely separated, there will appear certain well known, valuable signs. These signs are: (1) the uterus changes from a discoid to a globular shape; (2) the umbilical cord drops down a little, and (3) fresh bleeding usually appears in the vagina.

When these signs are observed, and not before, it is wise to proceed with delivery of the placenta with either the early expression or the Credé maneuver.

Many postpartum hemorrhages may be prevented by proper conduct of the third stage of labor. Too early attempts to deliver the placenta by forceful Credé, and other methods of delivery, and pulling on the cord are frequent causes of severe postpartum hemorrhages. These practices can readily lead to retained pieces of placental tissue, or membranes, or acute inversion of the uterus, with resultant severe postpartum hemorrhage. Therefore, it is extremely important that we should wait for the appearance of the well known signs and symptoms of complete separation of the placenta before we attempt to deliver it.

Other inexcusable causes of postpartum hemorrhages include the injudicious use of obstetrical forceps and pituitrin, and also attempts to do a version and extraction before the cervix is completely dilated and effaced.

There are five clear-cut necessary conditions or prerequisites for any successful forceps operation. These are: (1) complete dilatation and effacement of the cervix; (2) there must be no disproportion between the maternal pelvis and the presenting part of the fetus; (3) the fetal head must be engaged; (4) the membranes must be ruptured, and (5) the baby must be living.

Disregard of any of the first three of these conditions will usually result in extensive lacerations or may even cause rupture of the uterus. The same results often follow the unwise use of large doses of pituitrin, and yet we occasionally hear of forceps being used, or pituitrin being given, or an attempted version and extraction before the cervix

has had time to be completely dilated and effaced.

Extensive lacerations of the vagina or cervix may cause troublesome, and even fatal, postpartum hemorrhage. These lacerations, when occurring in a home, should be temporarily controlled by adequate packing until the patient can be transported to a hospital where proper light and efficient assistance may be obtained for the repair. If these lacerations develop during hospital deliveries, they should be repaired immediately by properly placed sutures.

Rupture of the uterus during pregnancy, labor and delivery, should always be regarded as an extreme emergency, because the resulting hemorrhage and shock frequently proves fatal to both the mother and baby. Fortunately, this complication is quite rare, but when it does appear, prompt and expert treatment is extremely important. And in spite of this type of treatment, some maternity hospitals report mortalities as high as 75 per cent for the mothers and 100 per cent for the babies, in certain series of complete uterine ruptures.

Causes of ruptured uteri include indiscriminate use of pituitrin, poorly healed uterine scars from previous cesarean sections or myomectomies, improper technique during manual removal of the placenta, forceps delivery or version and extraction, and external trauma.

A patient who has been delivered by cesarean section should be hospitalized for all subsequent labors and deliveries, in order that she can be observed for possible rupture of the uterus.

Treatment of a ruptured uterus usually consists of blood transfusions, morphia, and laparotomy with repair of the rupture or hysterectomy, preferably hysterectomy.

One of the most frequent causes of postpartum hemorrhage is uterine atony. There are many factors that tend to produce atony following delivery. The most important of these causative factors are excessive analgesia, prolonged anesthesia and operative deliveries. Other conditions that may result in atonic uteri and hemorrhages are lengthy labors, fibroid uteri, polyhydramnios and multiple pregnancies. It was reliably reported that the mother of the Dionne quintuplets nearly lost her life as a result of postpartum hemorrhage due to an atonic uterus.

A very valuable weapon to combat postpartum hemorrhage resulting from uterine atony has been given us within the past few years. I refer to the active principle of ergot, ergonovine. This drug may be given orally in tablet form or intramuscularly or intravenously in ampule form. When given by mouth or intramuscularly, it requires eight to twelve minutes to obtain firm uterine contractions, but intravenous use produces vigorous uterine contractions within fifteen to thirty seconds. The effect of ergonovine is much longer than that of pituitrin, and ergonovine can be given intravenously with impunity in 1 cc. dosage. Ergonovine intravenously has almost completely obviated the need for tamponade. In addition to the free use of ergonovine, the uterus should be massaged vigorously, and the blood loss should be replaced by blood transfusions, in case the hemorrhage has been marked.

Occasionally it is necessary to pack the uterus, and when this procedure is carried out, we should remember that a poorly packed uterus will bleed more than one with no packing at all. The uterine cavity must be packed tightly. Ordinarily it requires from five to ten yards of three-inch gauze to correctly pack the average size, bleeding, parturient uterus.

We all realize that obstetrical hemorrhage is still one of the three chief causes of maternal death (puerperal infection and toxemia being the other two), and we realize that obstetrical patients who lose an excessive amount of blood will regain their strength more slowly, will be much more likely to have postpartum infections, and will be less likely to nurse their babies than mothers with a normal blood loss. Therefore, with these realizations in mind, we should do everything possible to prevent or minimize bleeding in every pregnancy, labor and delivery, and we should be ready to replace abnormal blood loss with early, adequate blood transfusions.

SUMMARY

1. The treatment of placenta praevia and abruptio placentae is outlined. Liberal use of blood transfusions and cesarean section is recommended for the more severe types of these two complications.

2. Prophylactic and active treatment of postpartum hemorrhage is discussed. Physiology and management of the placental stage is reviewed.

3. Factors which increase the normal amount of bleeding are improper conduct of the third stage, injudicious use of the obstetrical forceps and pituitrin, excessive analgesia, prolonged anesthesia, operative interference, polyhydramnios, fibroid uteri, multiple pregnancies, extensive lacerations of the vagina or cervix, and rupture of the uterus.

4. The early use of blood transfusions is advised in all abnormal obstetrical hemorrhages, and ergonovine intravenously is advocated in uterine atony.

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517 Hamilton Building.

ABSTRACT OF DISCUSSION

Dr. H. Reid Robinson, Galveston: No one can successfully discuss such a topic in a few minutes, but Dr. Kanatser has so concisely and completely covered his subject that I can only stress what has been said. In placenta praevia and ablatio placentae the treatment will depend on whether the patient is in the hospital or the home, the rapidity of blood loss, the extent of dilatation of the cervix, and condition of the mother and baby. We know that the best place for these patients is the hospital.

In placentae praevia, if the diagnosis is made during pregnancy or labor, treatment will depend upon whether or not the child is viable. With a viable baby, undilated cervix and complete placenta praevia, cesarean section is indicated. On the other hand, if the cervix is sufficiently dilated and we have to deal with the partial or marginal variety, then a balloon should be used after rupture of the membranes, followed by spontaneous delivery or by version and extraction. If the child is not viable then equally good results will be gotten by bringing down a foot by Braxton Hicks' maneuver. Generally speaking, outside the hospital, no matter what the condition of the child, it is better to do a Braxton Hicks' bipolar version.

Points to be observed are: (1) The bleeding must be controlled as soon as possible. (2) A vaginal examination should not be made unless prepared to go on with appropriate treatment. (3) Shock, if present, must be combated. (4) Every precaution must be taken to prevent septic infection. (5) Delivery should not be hastened except in cases of cesarean section. (6) The placenta should be perforated, if necessary with a sharp instrument. (7) If possible the patient should be in a hospital.

Ablatio placentae, according to our cases in the John Sealy Hospital, is more common than placenta praevia. From 1923 to 1932 the records showed thirty-one cases in 3,750 labors, an incidence of one in 121, or 0.82 per cent, with a maternal mortality 6.5 per cent and fetal mortality of 65 per cent. The treatment was as follows: (1) watchful expectancy, such as rupture of membranes, binder, morphia, pituitrin, glucose, etc; (2) conservative interference as use of a bag to induce labor, forceps or breech extraction; (3) accouchement force (one of the deaths in my cases was due to manual dilatation), and (4) laparatrachelotomy under local anesthesia (if possible), with or without hysterectomy. When there is any doubt as to the ability of the uterus to take hold of the situation it had better be sacrificed.

With proper management during and directly following the third stage of labor serious hemorrhage should be rare. Prophylactic measures should be employed as watching the uterus, etc., and not resorting to Credé and other such practices as pointed out by the essayist. The placenta should be examined for tears and the uterus massaged. Ergonovine should be given as pointed out or for more lasting effect, ergotrate (1/320 grain or 0.2 mg.) intravenously. Probably the most common causative factors of uterine atony are excessive analgesia and prolonged anesthesia.

No one thing has contributed more to the successful outcome in all abnormal obstetrical hemorrhages than blood transfusions.

SULFANILAMIDE FOR ENDOCARDITIS

Prolonged treatment with sulfanilamide cured a case of acute ulcerative endocarditis, a usually fatal heart disease, Samuel Alexander, M. D., and Stewart F. Alexander, M. D., Park Ridge, N. J., report in *The Journal of the American Medical Association* for Nov. 16.

The disease consists of inflammation of the membrane lining the heart and results in ulceration of the valves of the heart. In this case it was due to infection with a streptococcic organism capable of destroying red blood cells.

The cure is attributed by the authors to the fact that treatment was instituted early in the disease, perhaps before deep bacterial invasion had taken place, and that the drug was given for six weeks. There seems little doubt that moderate dosage, long instituted, is more effective for deep seated infections than massive doses for a shorter period of time, they say.

FACTORS CONTRIBUTING TO ERROR IN DIAGNOSIS IN GYNECOLOGY*

M. S. SEELY, M. D.
DALLAS, TEXAS

It is a generally recognized fact that there is a greater percentage of errors in diagnosis of conditions in the female than male patients. Women as patients predominate in every branch of adult medicine and surgery, exclusive of industrial traumas. Their invasion into the industrial field of late years has been so marked as to foretell that they will soon reach a balance there. So we should profit by considering those factors which contribute to these errors.

The word "diagnosis" came to us through the Latin language from the Greek, *dia-*, through or thorough, and *gignosko*, to recognize. Today it is a far stretch to thoroughly recognize the female problems, for they outreach pure science, the applied science and art that has been developed.

Pure science fathoms only anatomical, physiological, biological, chemical and physical changes from normal. The biologic process as applied to psychologic and sociologic development in homosapiens is considered by many as a fixed factor following normally a definite pattern; therefore a pure science.

But here we must depart and declare that medicine uses pure science as far as it can and then must become practical and use applied science and art contemporaneously.

Applied science gives us the methods, tools and systems of procedure by which we use the truths of pure science in diagnosis. We call upon mathematics, chemistry, physics, biology, anatomy, physiology, pathology, bacteriology, immunology, psychology and sociology, modifying them, *secundum artem*, where necessary to our own needs. Applied science extends the simpler methods of observation enormously by giving us our instruments of precision. The hearing is augmented by the stethoscope; the sight by the special lights and lenses, the microscope, the cystoscope, peritoneoscope, roentgenoscope, photography, etc.

The senses of smell and taste are physiochemical and unaided fall far short of divulging the information that can be gained of excreta, secretions, and blood by methods devised by the chemist in the clinical laboratory.

No one is a master of all these instruments and devices. Skill in their use varies. Proper appreciation of their uses and limitations increases and decreases in proportion to one's familiarity with them. The sphygmomanometer has been in general use some twenty years; first it told us only blood pressure and pulse pressure. We now interpret it in relation to other observations and clinical findings, physical and chemical, and can determine why the pressure is high and what if anything can be done about it. Workers in the applied science and art of diagnosis have made much progress in systematizing clinical examination and logically arranging the steps that must be made to arrive at satisfactory diagnostic conclusions. Results of these efforts can easily be seen by comparing the contents of the clinical history of today (anamnesis, status praesens, catamnesis, and epicrisis) with those haphazard notes customary in my day of hospital training. More easily is systematic thought and reflection accomplished, more easily group-symptoms and sequences traced, thus favoring recognition of syndromes, the progress of, and causes and prospects of development; routine painstaking study of all tissues removed; postoperative follow-up and postmortem examinations; open discussion and criticism of results at hospital staff conferences. These things encourage reflective thinking, broaden our views and discourage oversights and snapshot conclusions.

The full written analysis of the case at hand seems arduous to one who first observes and considers it, but its intricacies and complexities are worth while. Practice in the use of this scientific recording method gives speed, strength and insight to him who uses it; forms our record files so useful in case study, follow up, etc., and collectively forms our statistics.

The inclination of most doctors is to sacrifice accuracy of detail in records of their own work as soon as they are out from under the compulsion of the authorities of the institutions, to trust their memories with details and sequences of events. Those who forego this temptation are well repaid for the time and trouble taken. Progress notes go far in demonstrating interest in the patient and continuing the patient's interest in progress. They are useful in collecting the fee and in medicolegal defense.

The overcrowded curriculum of our medical schools and the advent of the new specialties to be taught has made inroads on the hours of teaching gynecology. In our school, Baylor, pediatrics is given 148 hours, while gynecology has been reduced to 73 hours, twenty-three hours in the junior, and fifty hours in the senior year. Obstetrics is given 125 hours plus the time spent in attending cases. General medicine, general surgery, genito-urinary surgery and the tumor clinic all overlap into this field of work to a large degree.

*Read before the Section on Obstetrics and Gynecology, State Medical Association of Texas, Dallas, May 15, 1940.

Much of the first two years is spent in study of anatomy, physiology and bacteriology, and in the second and third years pathology is taught intensively: the major portion of which is supplied by the female. So on the whole the graduate has been taught a lot of gynecology. The anatomy and physiology must be reviewed and correlated in the didactic lectures and in the dispensary to keep it clearly in mind while normal and abnormal conditions are studied and compared.

Our textbooks on gynecology give great space and detail to anatomic malformations of the external and internal genitalia, and displacements of the internal genitals are depicted and stressed far beyond our present day interpretation of their importance. With woman the psychic element is great; by far the greater number of these anatomical malformations and displacements are unknown and symptom-free until some one has told her that she is malformed or has some organ displaced; then the psychic element enters in and there is maladjustment indeed. It is remarkable what deviations from normal anatomy and function women bear without concern when they are socially adjusted and therefore in a mental state of security and happiness.

Disturb her security and she starts a process of self analysis and begins to survey her position. She reads newspapers and magazine advertisements and articles. She listens to the radio and talks over her troubles and problems with neighbor women and friends and feels of herself with the newly acquired knowledge gained from them since their recent visit to a doctor or a clinic. She applies these findings to herself. In other words, her imagination is working to a high degree and is being cultivated, reaching a point often of interfering with her well-being.

It requires a thorough examination by a knowing, honest doctor to save her from a trip to the operating room. Perhaps he is a good family doctor who examines her well, calls a consultant, gynecologist or a psychiatrist, who restores her. All too often she chooses her own specialist who is better prepared to operate than to diagnose and restore her to normal channels: the exploratory operation well done, the appendix removed and a small cyst punctured or an ovary removed because of a recently ruptured follicle, and the uterus suspended. The placebo may have worked, but she may actually have had some functional disturbance which should have been recognized and corrected or she told of its innocence and to disregard it. This specialist who operated was not dishonest; he was careless. It was easy to get her into surgery. It is easier and more profitable to operate than to diagnose and dissuade from surgery. He is a pretty busy man, has lots of cases in the hospital, operates rapidly, is a good fellow socially, attends the lodges and clubs but seldom the medical meetings. He talks well and sells his services as a surgeon or specialist through social contacts. He does the profession little harm, the public little good. He is a bad example to the interne group. They see his rosy path and are tempted to follow him. Many do. Others hear him criticised, see the criticism as just, because of his carelessness and they turn from his path and become capable and conscientious doctors. The woman returns then with her same old symptoms; the placebo did not cure. Now by a long series of clinical and x-ray laboratory reports, all negative, he discovers she has "gland troubles" about which we have learned and "unlearned" a great deal in the last twenty-five years. Her husband begins to talk and listen to talk at his club about the high cost of medical care and agrees that government should do something about it.

A good clinical laboratory is a great help. It has its limitations. Its reports are sometimes misinterpreted; sometimes too great importance is given them. The clinical pathologist can't always make the diagnosis. Routine laboratory examinations have been developed and technicians trained to facilitate diagnosis, to minimize oversight. Thus a diabetic or nephritic patient without symptoms or a syphilitic patient without signs should be recognized by laboratory studies. Some doctors individually and some groups maintain laboratories. Too busy themselves to do the work they employ technicians or train one. Even the best workers in the best laboratories make mistakes that sometimes hinder as much as they sometimes help. In the same way the x-ray laboratory and the roentgenologist are called upon to aid, to throw light where they can, not only to make but to interpret the plates or screen views, but that seldom means more than a contribution to the information necessary for diagnosis.

Consultations with internists, psychiatrists and specialists in other fields as well as with other gynecologists so as to get a check on one's self occasionally are desirable. Costs are a factor to consider in all these, and the effort to save the cost often contributes to error.

Every woman who presents herself with abdominal or back pain or headache is not a gynecological case. A differential diagnosis must be made, and this is frequently difficult. Proximity of the digestive tract to the

internal genitals is such as to frequently make it impossible to say an inflammatory reaction is in one or the other. Appendicitis urgently requires differential diagnosis. Pelvic inflammatory disease is not an emergency, but if acute appendicitis cannot be ruled out operation should be done, the appendix removed, and the patient then treated. Our textbooks and journals outline these measures almost without end.

I have found some ideas prevalent in the minds of young practitioners which I know to be erroneous. One is that textbooks are of no value after graduation, that medicine is advancing so rapidly that by the time information reaches a textbook it is obsolete. Another is that the newest remedy or method is best. The facts are that we have made a few noteworthy advances in the past thirty years. We all can learn from textbooks. We can get more concise information from reference to a textbook on our problem case than from all the voluminous reading of current journals on the subject. Of the new remedies put on the market, about 1 per cent are useful enough to find a place after five years.

It is said that we find what we look for. The making of an objective examination and recording it without bias is not easy. Forming an opinion without bias, if in conflict with one's own interest, tries the courage and honesty of man. Watchful waiting for development of further symptoms is sometimes good practice, but when urged by anxious relatives and friends to do something, tries our courage and patience.

Sexual relations are a part of gynecology. That is the primary intention of those parts which make the woman distinct. Her sex affects her psychology, makes her social position, causes her actions and reactions. Biologically she is the female and acts as the female. Sociologically she is a female and her group acts as females. She goes through the psychic changes normally differing from the male with the advent of puberty, becomes timid, modest, blushing at her very thoughts of her part in life's plan. Menstrual cycles begin with their normal or abnormal character of flow and their problems for solution: irregularity, pain, excess or scanty flow. Pursued and won, the sex experiences, and she is physically and mentally the mature woman. Normally reliant upon her husband for protection and social security, accepting his sexual relations, anticipating and accepting motherhood, each child added to the flock an accomplishment, another charge, a worker, an asset, one to perpetuate her race, to reproduce her kind, but here all is not serene. Pregnancy, parturition and lactation are severe drains on a woman's reserves of vitality at best. We now comprehend some of these and are able to protect her by proper feeding, but there is much that we do not know. Our present social upset creates a marked commotion in her nervous system with the very announcement of pregnancy. All too often she is one of the work-team if not the sole bread winner of the family. It is not strange then that the gestation period should be an exciting factor in the development of psychoses, or that women should seek abortions regardless of consequences, or even suicide. Further pregnancies she must guard against. She may want to be sterilized. She may develop some defense reaction against sexual intercourse. Disease is simulated in many forms; consciously or unconsciously, she seeks operations that may sterilize. The peace of marital union is disturbed with all its consequences.

Menopause marks the cessation of menstruation, normally. With its psychic disturbances influenced largely by stress, it is frequently marked by disturbances of function. And we know not what changes in the endocrine system, atrophy of some, reduced and changed activity in some. Every hour a "detail man" tells us what to do about it. We have gone from extract of 1 grain of dried ovary substance to 10,000 rat units of estrone from the urine of pregnant animals in twenty years with favorable reports filling the literature and multiplying the biological manufacturers. The patients get a psychic benefit. Senility presupposes a weakening of muscles and a sagging of fibrous tissue supports, with development of cystocele, rectocele, prolapses of the urethra and of the uterus.

Thus it is by chronological stages that we look for certain developments—recognizing the normal, looking for the abnormal, and circumventing or removing abnormal developments where possible.

A careful, complete physical examination, impressive by its thoroughness, using the laboratory adjuncts that are necessary and explaining that further procedures are not necessary is invaluable. Then should come a council explaining the important findings, answering the patient's questions about physiological changes that have occurred or are about to occur, directing her well ordered living, hygienic measures and diet, prescribing safe sedatives and tonics, or other medicines and treatment if indicated, placebos if necessary. Their use saves lots of argument while time takes its course and physiology adjusts itself. This is the result obtained when faith-healing occurs, whether that faith

be in a religious cult, patent medicine, spine twisting or what not. The greatest help that we can offer is recognition of pathology and proper evaluation and treatment of it.

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416 Medical Arts Building.

PRESENT STATUS OF CLINICAL ROENTGEN THERAPY*

R. C. CURTIS, M. D.
TEMPLE, TEXAS

Roentgen therapy has become established as a useful therapeutic agent in the treatment of so many diseases and disorders that it would be well to discuss the present status in relation to the various branches and specialties of medicine.

In 1921 Mackee published his book on x-rays and radium in the treatment of skin diseases, thereby making radiation an established therapeutic agent in dermatology, and, following this, reports of treatment of other diseases were confined to radiological and other medical journals. The first book extensively coördinating general clinical roentgen therapy was published by E. A. Pohle, of Madison, Wisconsin, in 1938, and I believe that he made a wise division of the subject matter by delegating different subjects to outstanding men in their respective fields. In this work, Pohle has laid the foundation for the permanent establishment of clinical roentgen therapy as a therapeutic agent to be used as the method of choice in a wide variety of lesions from simple inflammatory to highly malignant diseases and at the same time has called our attention to the fact that roentgen therapy may be profitably employed as an adjunct to practically all other methods of treatment whether surgical, medicinal, endocrine or psychological.

Now we should consider what effect is desired from x-ray therapy and what is to be expected in the way of beneficial results in the particular disease or disorder to be treated; in other words, what do we have to offer the suffering patient?

For the purpose of discussion, this is divided into the following five sections:

1. *Palliation*—sedative action in many painful lesions.
2. *Prophylaxis*—protection of field of operation in certain infections and malignant lesions.
3. *Experimental*—the rational use of radiation therapy in conditions in which there is no satisfactory treatment of any other kind.
4. As an *accessory* treatment combined with surgery, glandular or medicinal therapy.
5. *Cure*—as the method of choice in many benign as well as malignant tumors in all tissues of the body. In glandular dysfunctions, cutaneous and subcutaneous infections and benign uterine hemorrhage. The various types of pneumonia and pneumonitis, as shown by the report of Dr. E. V. Powell in his series of cases while in Temple, Texas. This work is being carried on and his findings are being substantiated by continued good results.

Radiation biology and physics are of much interest to the radiologist, but of only casual interest to the surgeon, internist, or the general practitioner, so I shall forego any discussion along this line. However, everyone is probably interested in knowing that results are obtained by means of four different type doses of x-rays: (1) sedative; (2) stimulative; (3) inhibitive; (4) destructive.

Radiation therapy having proven its worth in the hands of Dr. Mackee is probably more firmly entrenched in the armamentarium of the dermatologist as a routine method of choice or as an adjunct than in any other branch of medicine up to the present time. Most *skin conditions* commonly seen by the general practitioner are amenable to x-ray therapy.

Many *diseases of the blood, blood forming organs and the circulatory system* respond favorably to x-ray therapy.

Many *diseases of the respiratory system* respond favorably to x-ray therapy. Whooping cough is a condition in which the author's experience has led him to believe that x-ray therapy is almost a specific.

Diseases of the Gastro-intestinal Tract.—Acute infections of the intestines should not be treated by roentgen therapy; however, tuberculosis of the peritoneum and the mesenteric glands may be treated by roentgen rays with good success, and Kelly of Omaha reports excellent results in postoperative peritonitis. Ileocecal tuberculosis and actinomycosis have been successfully treated with x-rays, and during the last few years roentgen therapy of gastric and duodenal ulcers has been more and more successful. Radiation therapy of cancer of the esophagus is unsatisfactory, even though better than radium since radium produces such a rapid stenosis,

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but some cases of carcinoma of the stomach are cured and many are benefited at least temporarily.

Carcinomas of the colon, of which cancer of the rectum is the most common, are much more favorable objects for radiation therapy. A few cases are cured, many completely inoperable cases become operable after several months, and in practically every case there is regression and prolongation of life. Irradiation of malignant tumors of the liver, gallbladder and pancreas has not been very successful.

Diseases of the Nervous System.—Most cerebral tumors are primary, visceral cancers rarely metastasizing to the brain. The most common of the nervous system is the glioma. There are numerous variations in the microscopic structure of gliomas, so that the results of treatment depend upon the differentiation.

Radiation produces best results in infantile paralysis when used early; as soon as the temperature is normal, medullary irradiation should be instituted. Tumors of the cord and mestastatic malignancies of the vertebrae do not respond so satisfactorily; the same is true in regard to other lesions of the cord.

Some neuralgias respond to radiation, but on the whole the results are not satisfactory.

The opinion in regard to herpes zoster differs, but in our hands the response to local treatment has in every case been satisfactory.

Many *inflammatory diseases of the eye and ear* respond favorably to x-ray therapy.

Diseases of Muscles, Tendons, Bones and Joints.—Varying degrees of success attend the treatment of diseases affecting the muscles, tendons and joints, depending upon the type of lesion.

Glands of Internal Secretion.—The pituitary, master gland of the endocrine system, is subject to some diseases and many disorders. The pituitary is known to have a number of functions, the anterior portion controlling the skeletal development and growth, the activity of the thyroid, adrenal cortex, the gonads, the thymus, parathyroids and pancreatic islands, and some ill defined influences on carbohydrate and fat metabolism.

Cushing reports that 25 per cent of all brain tumors are pituitary, and that 80 per cent of these are of the anterior lobe.

Undoubtedly correlation exists between the anterior lobe and the female sexual organs, and treatment of the pituitary gland for menopausal disturbances is becoming a standard procedure.

The thymus is another gland, pathologic changes of which are amenable to roentgen therapy. Thymic hyperplasia produces alarming symptoms in the new born infant. During the first few months of life, any moderate enlargement of the thymus, due to its location, will produce mechanical pressure on the trachea and great vessels and may produce death; fortunately, one very moderate dose of x-rays is practically always followed by relief in a very short time. Infection and enlargement of the upper mediastinal and retropharyngeal glands in infants may simulate an enlarged thymus; fortunately, symptoms from enlargement of mediastinal glands also respond to roentgen therapy.

The parathyroid glands control calcium metabolism and hyperfunction of these glands leads to demineralization of bones, metastatic calcification, renal calcium deposits and the formation of urinary stones. The serious prognosis attached to this disease demands removal of the overactive glands or their permanent inactivation to a large extent. Since complete extirpation leads to tetany, the reduction of activity to normal levels (as determined by blood and urine calcium estimates) by roentgen therapy, is definitely the treatment of choice.

The thyroid gland presents a field of argument between some surgeons and radiologists. This gland is subject to many diseases and disorders, or better said, to various pathologic changes, some requiring surgery, some medication, and some roentgen therapy for the best final results. Close study of the case and consultation between the surgeon and radiologist should result in the patient receiving the treatment that is best suited to the case; and at times even a combined method is best.

Tumors and dysfunction of the suprarenal gland present many syndromes, some of which are, though empirically so, amenable to roentgen therapy. A study of the case will determine whether or not radiation is indicated.

Diseases of the Urinary Tract and Male Genital Organs.—The kidney is subject to many diseases and tumors, only one of which responds to irradiation alone—Wilms' tumor.

While there is some response to irradiation by some of the kidney tumors, all of them with the exception of Wilms' tumor should be considered surgical problems. While it has been found that postoperative irradiation of renal tumors is of practically no value, preoperative irradiation will reduce the size of some tumors, thereby making them better surgical risks.

The bladder is subject to a large variety of tumors, and these as a problem have been turned over to the radiologist. Some bladder tumors are best treated by radium implants, some by roentgen therapy, and others require the combined method for best results.

Diseases of the prostate may be divided into infections and tumors; tumors of the prostate are benign hypertrophy and malignant neoplasms. Urologists are turning more and more to roentgen and/or radium therapy for more satisfactory results in most of these cases, especially since the accurate measurement of, and placement of, dosage is now possible without producing damage to adjacent structures.

In testicular tumors up to the present time the best results have been achieved by radical surgical removal followed by irradiation. Since testicular tumors metastasize early to the chest, radiographic examination of the chest should be made before treatment is instituted.

Tumors of the penis, which are relatively rare, respond best to a combined treatment of radium and roentgen therapy.

Much has been said pro and con in regard to roentgen *therapy of the female breast*, but the whole matter has just about finally been rounded up into a few words. While many cases of mastitis are cured and precancerous lesions cleared up satisfactorily by radiation, the case of cancer of the breast may be summed up as follows: For the best results in the greatest number of cases there is a trend toward the combined method of preoperative irradiation followed by surgical removal and then concluded with postoperative irradiation, a method that is proceeding rapidly to adoption in the treatment of breast cancer.

Gynecologic Conditions. — In the female pelvis let us first consider pelvic infections. Infections in the fallopian tubes and adjoining structures other than gonorrheal constitutes one of the most common and sometimes one of the most difficult problems in gynecology, and gynecologists are eager to try out any new method of treatment that sounds promising. Menorrhagia, even metrorrhagia are often present although occasionally amenorrhea occurs. Pathologic changes are so extensive that ordinary palliative measures give little relief, and efficient surgery is both hazardous and difficult. Radiotherapy has had extensive application with end results as follows: In one-third of the cases relief is obtained and the disease picture disappears in twenty-four to forty-eight hours by crisis. In another third the duration of the process is shortened to a small fraction of the usual duration, and in the other third there is only fair improvement or even complete failure to obtain any relief whatever.

Roentgen rays are not suited to replace the usual methods of treatment of gonorrheal infections of the pelvis, which probably accounts for the failure mentioned—the process may be gonococcic.

Temporary Sterilization in the Treatment of Pelvic Infections.—Since pelvic infections are likely to flare up during the process of menstruation a stopping of this process should lead to symptomatic relief and usually does. An important factor has been observed, *i. e.*, the periods stop sooner when irradiation is given early in the intermenstrual period. Treatment given in the latter half of this interval may be followed by two or three menstruations before cessation of flow. Temporary sterilization is usually over a period of from six to twelve months. In the majority of cases, 90 per cent, menstruation returns to normal; in others there are varying irregularities.

In regard to the uterus, the first condition to consider is fibroma, or fibroid tumor, and the general opinion is that in some of these cases roentgen therapy is the method of choice. When it is chosen it is important to administer enough treatment to produce sterilization in order to get the best results. There are certain indications for and certain contraindications to the use of roentgen therapy in the treatment of fibroids. Each case is an individual study in order to determine the method which will result in the most satisfactory result.

Carcinoma of the cervix is one of the most common and, therefore, one of the most important malignant tumors met with in gynecological practice. The highest percentage of cervical cancer occuring during the menstrual life presents somewhat a different picture and problem from cancer of the fundus, which begins to increase in frequency at the age period when carcinoma of the cervix is becoming less frequent.

Suffice it to say that here again individual study of each case is necessary to determine the best procedure as regards irradiation alone, radium alone, surgery alone, or a combination of two or even all three agencies in order to obtain the best end results.

What has just been said in regard to cervical cancer also applies to cancer of the fundus. Gynecologists are, however, turning more and more to the radiologist for aid in fighting this foe of the female.

Malignant tumors of the ovary usually metastasize early and are recognized late so that they present a real problem to the gynecologist. Radiation has proved of real

value when used with and without surgery in prolonging life and relieving pain.

Last but not least benign uterine hemorrhage without demonstrable pathology is a condition that is becoming more frequent or more of these patients are consulting their family physicians about the condition, especially in the forties near the beginning of the menopause. This is a condition in which roentgen castration is without doubt the method of choice for obtaining prompt and permanent relief, and in our hands with a dosage not large enough to damage any other tissue, and in which the results are almost universally satisfactory without any complications.

The production of menopause by x-ray is now routine with many members of the profession in the treatment of cancer of the breast in women who are still menstruating, so that it is at once assuming its position as an auxiliary procedure. And since there is such a high frequency of cancer in women menstruating beyond the average age the general opinion is growing that all women who are still menstruating after their forty-eighth year should have x-ray menopause brought about as a prophylactic measure.

At the King's Daughters Clinic the full coöperation of the Staff in their consultations with the roentgenologist in regard to conditions amenable to roentgen therapy is greatly appreciated by the roentgenologist, who endeavors to keep the staff familiar with the steady advance of clinical roentgen therapy. As a result most of the diseases mentioned in this paper are routinely referred to the x-ray department for roentgen therapy.

In conclusion of this discussion, which I hope will lead to a more widespread consideration of roentgen therapy and more frequent consultation with the radiologist, may I say that this paper is based on information obtained from several sources, Mackee, Pohle, Yearbook of Radiology, radiological and roentgenological publications, as well as from the experience of the author during the past twenty years.

While many diseases and disorders are treated with varying degrees of success by roentgen therapy, it is the earnest desire of the author to impress the medical profession as a whole with the importance of the fact that roentgen therapy is now another well established therapeutic agent which has proven itself; that its use for the best results depends upon accurate diagnosis, consideration of indications, contraindications, together with judgment in administration, just as with all other methods of treatment; and, finally, that consultation with a roentgenologist is imperative for the proper administration of, and the satisfactory results that always follow proper use of, the correct procedure at the indicated time.

King's Daughters Clinic.

ABSTRACT OF DISCUSSION

Dr. C. A. Wilcox, Wichita Falls: The essayist covers this very wide subject in an excellent manner. I shall discuss only a few points. The empirical use of the x-ray in conditions which are not amenable to usual remedial measures is important. Psychotherapy is important, and we should not forget that many conditions are much improved or cured when least expected. The treatment and at least temporary cure of testicular tumor metastases may be cited as an example. Dr. Kelly's reported drop of mortality rate from 62 per cent to 21.3 per cent in peritonitis certainly merits our consideration.

In diseases of the eye, the preferred source of radiation has been radium but having a recent case in mind I would urge that we do not forget that roentgen ray is equally effective. This case, biopsy showed to be a squamous celled epithelioma of the conjunctiva, over the ciliary body, involving the sclera and border of the cornea. Roentgen radiation produced a perfect cure with a very small scar and no damage to any portion of the eye after one year.

The treatment of myelogenous leukemia has always been more or less unsatisfactory. X-radiation being at best palliative, it may not be out of place to call attention to recent experiments reported from the University of California, where Dr. J. H. Lawrence is using radiated phosphorus, the source of radiation being produced by Dr. E. O. Lawrence by means of the atom-splitting cyclotron. I have observed the use of this agent and can state it was miraculous in its effect. This brings up a point meriting some thought, the use of x-radiation much less penetrating, of small quantity, over large body areas and for long periods of time.

To conclude these remarks, I wish to stress the fact that x-ray therapy should be used only by those qualified and thoroughly grounded by study, precept and experience, for it can be very harmful as well as helpful.

PHYSICAL EXAMINATIONS OF DOMESTICS URGED

The individual physician must protect the families in his care, and through them the community, by urging physical examination of domestic employees. Repeated emphasis on the necessity of this should result in the earlier diagnosis of tuberculosis and in the prevention of exposure to infants and children from this source of infection. An annual health certificate declaring freedom from syphilis, gonorrhea and tuberculosis should be the requisite for the position of nursemaid.—David V. Shar, M. D., Journal-Lancet (June) 1940.

AGES OF MOTHERHOOD

"Approximately 80 per cent of women give birth to their first babies between the ages of 15 and 35," *Hygeia, The Health Magazine* states. "Over half of these first babies are born to mothers aged 20 to 25. Only slightly over 2 per cent of the first born babies have mothers past the age of 35, and about a third of 1 per cent have mothers over 40 years of age. The risk to mothers is greatest with the first child and with the last of many children."

THE MODERN MASTOID OPERATION PERFORMED WITH THE ELECTRICALLY DRIVEN SURGICAL BURS*

SIDNEY ISRAEL, M. D.†
HOUSTON, TEXAS

My purpose in presenting this subject for consideration is to call attention to a technic which places surgery of bone, especially the mastoid, on a modernized basis and, as it occurs to me, in keeping with the progress that has taken place in other departments of medicine and surgery; therefore, abreast of the times.

Enthusiasm for the technic has prompted me to delve into the history of burs from their origin up to and including their present state of perfection to a high example of the manufacturers' art. We are indebted to those pioneers in dentistry who, as early as 1847, made the first steel burs by hand. These burs were operated at that time by rotation in the hand, or by means of a jeweler's bow. Experience with the use of the burs makes one realize the formidable obstacles that these pioneers had to overcome. Likewise, as a result, one can appreciate the anxiety of the patients who, when they would visit a dentist on account of a carious tooth, would be subjected to considerable hammering and chiseling or gouging in order to satisfactorily prepare the cavity for the reception of the filling.

From that point of their origination, surgical and mechanical ingenuity produced the old style and, by some, well remembered hand or foot pedal machine not unlike our old and familiar sewing machines, which furnished the power to operate the burs. Following this it was not long before the advent of the electrical engine to operate the bur, which appeared in 1876.

During these years much experimental work was done on burs and their method of rotation, and many obstacles were encountered and overcome. History shows that many of them were either too heavy or too light, the engine too fast or too slow, or that their controls were inadequate. Some lacked sufficient power or could not be sterilized sufficiently, or there was some other mechanical bug which is always present in experimental equipment.

The author of the first operation in the mouth with the help of a dental engine was Dr. Harrison Allen in 1876 who, at that time, was professor of anatomy and surgery in the Philadelphia Dental College. In the same year Dr. Arthur Mathewson of Brooklyn, with the help of Dr. W. Jarvie, a dentist, and his dental engine removed an osseous tumor in the auditory meatus. These records are the earliest authentic ones that I could find on the use of the dental engine in general surgery.

With the development of the surgical engine, one of the first surgeons to see its advantages was Prof. James E. Garretson, who appreciated its worth and utilized it in all his surgery wherein it was applicable, both private and hospital, from 1880 to 1895. Through the example as set by Dr. Garretson and the inspiration derived from him, Dr. Mathew H. Cryer became one of the outstanding experts on surgery of the bone utilizing the surgical engine, and was responsible in a large measure for its further development and the refinement of technic. Dr. Cryer, also, because of his keen interest and knowledge of anatomy, was more than able to appreciate the superiority and advantages of this surgical engine.

In 1914 our own Dr. Joseph C. Beck, of Chicago, presented a paper before the American Academy of Ophthalmology and Otolaryngology on the subject of the electrically driven bur on bone surgery of the head. It was an excellent presentation and showed the usefulness of this equipment in various surgical procedures about the head. Since that time better refinement of equipment has taken place, and at the present time the surgeon is not handicapped in this direction.

The modern electrical surgical engine and the great advances made in the development of the surgical burs offer to the surgeon a means of developing a refinement of technic second to none at our disposal at the present time. With the accuracy of manufacture and the beautiful control of the equipment available from the standpoint of the operator, one is left little reason to reject the opportunity now available in perfecting one's technic and establishing confidence which can come only with familiarity and experience. Through the advances in various other departments of medicine and surgery, both diagnostically and therapeutically, it will be agreed that surgery of the mastoid bone should be no exception. Nor has it reached the stage of refinement and modernization in technic that would not be a justifiable procedure from the point of view of the surgeon and a welcome means of minimizing some of the shock and discomfort from the standpoint of the patient. Accomplishments and progress are obtained only through a forward movement.

The superiority of the electrically driven burs in performing the mastoid operation at the present time are outstanding in, first, speed, second, safety. The time of performing the mastoid operation, whether it is

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†Deceased, July 17, 1940.

the operation known as the simple mastoid operation or the radical mastoid operation, is cut practically in half in the hands of one familiar with the equipment. The pounding from the hammer and chisel is completely eliminated, and the patients do not have the postoperative discomfort or traumatism which they cannot miss with the hammer and chisel technic of bone removal. Recovery in operations wherein the electrically driven bur is used about the head takes place with greater promptness because of the minimum amount of shock and local disturbance.

The electrically driven burs are, as expressed by Beck in 1914, safer than the ordinary curette or gouge. There is little likelihood of one opening into regions unintended, as is frequently the case when using curettes or gouges. With the electrically driven burs one can control to the fraction the bone removal, and it is possible to develop a palpation sense, or a feel with the end of the bur after sufficient training and experience. This latter, of course, is not possible with a hammer and chisel. The bone excavation is rapid and the wound is smooth in appearance, with no sharp ridges or jagged or ragged edges, and the postoperative dressings are made possible without discomfort. The bone excavation has the appearance of a dissection, smooth and with bevel edges free from any projections. The modern burs as I have selected in the technic followed are practically free from clogging when in use, and with the absolute control of the bur by the hand cutoff, one is able to do in excavating the bone just exactly what one intends, and more satisfactorily. The surgeon can direct his entire attention to the cutting instrument and the field to be attacked with greater accuracy.

The technic of the mastoid operation with the electrically driven bur does not differ in any respect from the usual or classic type of operation except that no chisel and hammer or gouge are used in entering the bone or removal of bone, nor is the curette employed. Cold sterile water is used constantly to keep the field moist and cool when necessary while the bur is being operated. It is my opinion also that a conservative attitude with reference to the removal of the posterior bony wall offers a better cosmetic result.

I am certain that after one has used this technic on a few patients in order to familiarize himself with the equipment and just what it will do, he will have a better understanding of the chagrin a dentist's patient would feel towards him if they were told that instead of using the electric bur for excavation of a tooth, he was going to use a chisel and hammer. It would be my recommendation to those who desire to develop a technic for this type of mastoid surgery to use first either beef bones or blocks of wood or cadavers for a short while in order to become familiar with the different type burs, and to develop the feel or touch which is necessary for fast and accurate work.

The equipment should consist of a well built surgical engine which is portable, a flexible cable which can be sterilized in the autoclave, together with a handle in which are inserted the different size burs and attached to the flexible cable. All of these are subjected to autoclave sterilization. The handle controls the rotation of the bur with a quick start and stop action, and the engine or motor is controlled by means of a foot switch. Not more than six burs of different sizes and shapes are necessary to do practically any type of mastoid exenteration. Although one could do the operation with two burs of the proper size and shape, a working set of six affords greater choice and flexibility.

The enthusiasm that developed from the use of this equipment, and the great success occasioned therefrom is responsible for the urge to pass this word along. That "there is nothing new under the sun" is truly a truth ably expressed and applicable in this instance. In closing, let me quote from one of the memorable expressions of William Ellery Channing:

> I call that mind free which resists the bondage of habit, which does not mechanically repeat itself and copy the past, which does not live on its old virtues, which does not enslave itself to precise rules, but which forgets what is behind, listens for new and higher monitions of conscience, and rejoices to pour itself forth in fresh and higher exertions.

2418 Travis Street.

ABSTRACT OF DISCUSSION

Dr. Charles S. Alexander, Houston: It has been my privilege to have assisted Dr. Israel in what he correctly terms "The Modern Mastoid Operation." The pictures that we have just seen and the discussion of them by Dr. Israel leaves very little for one to add. What I shall say is really a summary and an emphasis of the points already brought out.

There are, in my judgment, three chief advantages of this operation over the old one in which the chisel and hammer is employed.

First, the operation is safer. In spite of the fear that one feels on first thought of the mechanical bur, it is a safer instrument than the chisel and hammer. In the hands of the inexperienced a powerful instrument, such as the bur, can, of course, be destructive, just as any instrument or any method that is employed in any type of work; but in the hands of an experienced operator, the bur can be properly guided and at all times be kept under control. The danger of fracturing bones is avoided and actually the instrument is under far greater control than the chisel.

Second, the time of the operation is shortened. It is self-evident that with this method the bone is taken away far more quickly than with the chisel and curette. If any dense sclerotic bone is encountered,

one is especially grateful for the bur, for in these cases especially, is much time saved. Obviously, the anesthetic is shorter, the shock is less, and these advantages are certainly in the patient's favor.

Third, the convalescence is shorter. Due to the clean, smooth surface that is left after the modern operation, healing in most cases is more rapid than in the older method, and it is also my judgment that the scar is better.

While the bur is not a new instrument, it has not been used extensively in recent years in mastoid surgery. I feel that we should be grateful to Dr. Israel for reviving interest in this method and in demonstrating so thoroughly its advantages and its applicability to our mastoid problems.

Dr. J. F. Gamble, Houston: In my association with Dr. Israel in the ear, nose and throat work at Jefferson Davis Hospital I had the opportunity to see and work with him as he developed a technique in the use of the electric rotary drill and burs in work upon the cranial bones. After assisting him in several of these operations upon the mastoid bone and having used the method myself I am convinced that it is a practical procedure and easy to perform. It is similar in principle to work in the mouth by use of the dental engine and to the method of Dr. F. H. Albee in the use of his electric rotary saw in bone transplant work.

I would recommend exercising reasonable care and the usual surgical cleanliness; also that a good selection of burs be available for use in various positions. By dripping sterile water on the bur it is freed of its cuttings and burning of the bone is avoided. For safety it is better to open the cortex with the bur slanting so that the operator may have a good view at all times of what he is cutting. Also it is thought safer for the beginner to enter the tympanum with a small curette. But the radical operation can and recently has been performed with the electric drill only. Its use gives a smoothness to the field of operation that is very gratifying, and the technique is not hard to acquire.

EFFECT OF HORN PLAYING ON ASTHMA

It is possible that the well disciplined breath control required for playing the horn could have a favorable effect on asthma, *Hygeia, The Health Magazine*, states in answer to an inquiry. "In certain asthmatic patients," *Hygeia* explains, "the onset of attacks is influenced by nervous factors which may, in part, be brought under conscious control of the patient. This control may be improved by training, and for this reason physicians sometimes prescribe breathing exercises for asthma." However, it is pointed out that certain children "outgrow" their asthma as they leave childhood, and the improvement noticed in a child who had begun to play a horn might be due to this factor instead.

FAR-SIGHTEDNESS AND VISUAL CLARITY

Far-sighted persons cannot see distant objects more clearly than persons with normal eyesight, *Hygeia, The Health Magazine* points out in answer to an inquiry.

"The so-called far-sighted eye is smaller than the normal eye," *Hygeia* says, "and therefore parallel rays of light focus behind the sensitive screen (retina). For the far-sighted person to see far objects clearly it is necessary for the lens muscle to help in bringing the focus on the retina; the normal eye sees the distant object without any muscular effort. With this muscular action the far-sighted person may be able to see objects at a distance just as clearly, but certainly no more clearly, than one whose eyesight is normal."

VACCINIA WITH OCULAR COMPLICATIONS

M. P. SPEARMAN, M. D.
AND
W. E. VANDEVERE, M. D.
EL PASO, TEXAS

Various warnings regarding the necessity for vaccination against smallpox are being sounded anew by the public health services and private physicians. In certain parts of the United States particular stress is being laid on the potential danger to large population segments not now vaccinated. In view of the re-awakened interest in mass vaccination it is thought timely to discuss an interesting complication that is perhaps less rare than is generally known.

Inoculation of the eyelids and cornea following vaccination has long been recognized to be a dramatic, dangerous complication. Atkinson and Scullard[1] cited ninety-one cases from the literature, and added two of their own. Of the ninety-one cases they reviewed, thirty-two showed involvement of the cornea. They believed that some impairment of the vision occurs in at least one-third of the cases reported. Since visual impairment is the possible tragedy in the sequence, it must, of course, be prevented by all means.

CASE REPORT

D. D., a girl, age 8, was referred to us November 4, 1938. She had been vaccinated on the left arm for smallpox ten days previously. Five days after the vaccination there appeared simultaneous redness and swelling of the left upper eyelid and the vaccination site. The patient was hospitalized by us. The temperature was 103 F. The left upper eyelid was markedly swollen, only slightly tender to palpation, showed five scattered pustules along the margin. Careful inspection of the cornea, using a speculum, revealed no corneal involvement. The lower lid was normal. There was a copious flow of tears. There was a surprising lack of pain or discomfort.

Treatment consisted of cold boric acid packs, applications of tincture merthiolate to the lid margins and frequent instillations of 1 per cent mercurochrome ointment into the eye. Care was used in all manipulations to prevent the pustules from rupturing. Three days after admission to the hospital the pustules along the lid margin had disappeared, leaving only brawny patches rather hard to the touch. Likewise the site of vaccination on the arm had changed from a pustular area to one of dusky red with thin crusting. The swelling of the lids had disappeared and the cornea was still clear. The pupils reacted normally to light and accommodation. No signs of intraocular pathology were discernible. The patient was discharged to her home. Inspection one year later revealed no scarring of the eyelid, and no damage to the cornea.

It was postulated that the probable route of transference in this case was (a) no dressing was applied to the vaccination site on the arm, (b) the site was scratched with the fingers of the right hand, (c) some of the virus was thus carried to the left eye by subsequent scratching of this area.

COMMENT

Aside from the history of the above case, one of the most striking points in the diagnosis was the remarkable similarity in appearance and behavior between the lesions

Note vaccinated site on left arm, and the marked swelling of the left upper eyelid.

on the eyelid and the arm. Some of the exudate from a pustule on the lid could have been inoculated on the ear of a rabbit, where if true vaccinia, a lesion would appear on the rabbit's ear similar in appearance and clinical course to a vaccinated area on the arm or thigh. However, this proof was not considered necessary, in view of the very clear diagnostic pointers present.

Immediate concern for the protection of the cornea led us to employ mercury salts in liquid and ointment forms, since it has been shown that certain forms of mercury in very weak dilutions can inactivate the virus of smallpox. Delicacy in manipulating the lids is necessary lest the pustules be ruptured, thus allowing the exudate to flow over the cornea.

Prevention of ocular complications must be the first concern. A dry dressing should be placed over the vaccinated site on the arm or thigh immediately following the vaccination. Should this dressing be loosened by the child, especially if very young, it would be well to provide restraint of the hand movements by the employment of elbow cuffs for several days. If in spite of these measures, any sign of ocular inflammation develops shortly after vaccination, the possibility of ocular inoculation with the virus must be immediately considered, and appropriate treatment begun.

1001 First National Bank Building.

REFERENCE

1. Atkinson, W. S. and Scullard, G.: Vaccinia with Ocular Involvement, Arch. Ophth. 23:584 (March) 1940.

PRE-EMPLOYMENT EXAMINATIONS*

ROSS TRIGG, M. D.
FORT WORTH, TEXAS

In 1861 Horace Dobell of London advocated as a custom periodical examinations for all persons and their children, but when and where the practice of pre-employment examinations originated, I do not know. However, this practice probably was first instituted by the railroads for the purpose of selecting only those physically fit for certain railroad duties.

As a rule the physical requirements of examination for railroad employment were not too strict and in many instances were worse than useless because of the manner in which they were conducted. I learned from a booklet published by Wm. G. McAdoo, National Railroad Administrator during the World War, that many of the leading Eastern lines required examinations only for vision, color perception, and hearing, and such examinations were made by yard masters, round house and section foremen. Once I witnessed the examination of an applicant for railroad employment which was made by a local surgeon in a nearby Texas town. After an examination for an inguinal hernia and blood pressure, he certified the applicant as physically fit.

While an interne in a Fort Worth hospital, I overhead a fellow inmate consoling a switchman who had lost a foot and would never be able to follow his occupation again. The switchman replied, "That won't make any difference, I will get by the examination all right. The doctor will pull down my pants and examine me for a rupture, and he will never know that I have lost a foot." Not so long ago in another Texas town, a medical examiner qualified a negro applicant without detecting an artificial foot and leg. I once asked a young friend what his father was doing and he replied, "Well, his eyesight got so bad he could not hold a job at the laundry, and he is a flagman now for the railroad company."

Since the relationship of occupation, disease and injury is now a most important national medical and legal problem, pre-employment medical examination is almost a necessity and is compulsory in North Caro-

*Read before the Section on Public Health, State Medical Association of Texas, Dallas, May 15, 1940.

lina and optional in Wisconsin. The purpose of such examinations varies somewhat. In some instances the reasons are purely selfish and perhaps justified protective defense measures of the employer against claims of disability by the scheming and dishonest employee with some pre-existing, non-disabling defect or the employee with some disease, the symptoms of which are so often sympathetically classified by our colleagues, industrial commissions, and courts as the effect of some injury fancied, minor or otherwise. Recently a negro was referred to our office for treatment for an external thrombotic hemorrhoid. We advised the patient and his employer that the condition was not traumatic or compensable. The hemorrhoid was incised. Later the patient alleged that the sphincter had been cut and he received a verdict from the district court for total permanent disability.

Public carriers such as railroads and bus companies cannot be too careful in the selection of those who are employed and entrusted with the duties of the safe transportation of the public. Defective vision and hearing, loss of color perception and constitutional diseases which predispose to sudden death should disqualify all who apply for such positions, and pre-employment examination is the only method of detecting those unsuitable for this responsibility. Often pre-employment examinations will expose applicants who are physically unable to work without danger to themselves or to fellow employees; those who are carriers of infectious or contagious diseases easily transmitted; and others who have disqualifying physical defects, thereby effecting a saving to industry in compensation rates and claims.

Nearly all railroads have employees hospital associations and in some industries, sick and health or welfare associations have been created and financed by mutual employee assessments. Under such arrangements it is desirable that no one be employed who may, because of unsuspected disease, become a financial burden to such an organization. Diabetes, peptic ulcer, heart disease, hypertension, varicose veins, chronic leg ulcers, phlebitis, tuberculosis, syphilis, or neurasthenia are examples of such chronic diseases. The cost of such employees through sickness, loss of time, and inefficiency may be staggering.

If time permitted, I could present case histories of compensation claims that have been made for the following diseases: brain tumors, cancer, headaches, pneumonia, apoplexy, epilepsy, cerebral softening, dizziness and headaches, otitis media, insanity, deafness, ruptured ear drums, cataract, persistent unilateral dilation of a pupil, iritis, conjunctivitis, corneal ulcers, trachoma, defective vision, tuberculosis, pleurisy, bronchiectasis, bronchitis, spontaneous pneumothorax, pleural effusion, pneumonoconiosis, herpes zoster, myocarditis, coronary thrombosis, coronary occlusion, hypertension, rupture, prostatitis, appendicitis, floating kidney, Bright's disease, varicose veins, phlebitis, chronic leg ulcers, neuritis, inguinal adenitis, ingrowing toe nails, bunions, corns, orchitis, epididymitis, variocele, hydrocele, internal and external hemorrhoids, external thrombotic hemorrhoid, anal fissure, rectal hemorrhage, tumors of testicle and cord, back pains, spinal arthritis, spinal curvature, spinal anomalies, pruritis ani, loss of manhood, typhoid fever, typhus fever, malta fever, barber's itch, dermatitis, occupational diseases, eczema.

Alas, I have learned from bitter experience the ghastly effects of a strain upon the human system. Why was I not taught in college that a strain is the chief etiological factor in the production of the conditions enumerated above. Why should I have been chagrined and embarrassed by the scorn of claimants and lawyers, and why should my ignorance have been exposed and my integrity questioned in court—it was because I did not possess this knowledge. Our schools and authors must hasten and revise their teachings and books. Strains must be given the responsibility for all pain and disability suffered by the human body.

No matter how thorough the examination might be, a dishonest employee will find a loop hole. Certain physical defects *per se* are non-disabling and when present, they should be accurately described and recorded in the report and the applicant may be qualified where qualifications in such cases is discretionary with the examiner. The pitiful consequences of the disqualification of an applicant who has a family, and who seeks an opportunity for work after several years of unemployment, may influence the examiner to be too lenient. Subsequent claims of serious proportions based upon trifling pre-existing defects have many times made me regret this weakness. A short time ago a negro was sent to our office for pre-employment examination. We discovered the total loss of vision of the left eye due to a cataract which the negro said was of long standing. This was recorded in our report, and he was qualified, but after his discharge a few months later, he was awarded compensation in a district court for total loss of vision of one eye, on his claim that the loss of vision was due to an injury. I once qualified a friend who had a very slight congenital umbilical hernia, and to my disgust, he soon claimed disability because of alleged pain in

the hernia. Such cases could be recited by the day.

If we were strictly required to qualify only applicants who are unquestionably physically fit probably 40 per cent of those whom we now qualify would fail to pass the examination, and consequently many worthy men would be denied the opportunity of engaging in a gainful occupation.

The more complete the examination the better, but local industry cannot always afford Wassermann tests, blood examinations and x-rays. These tests are desirable and should be the routine when the company conducts a hospital with a full time staff. At present much confusion and harm comes from our varied conception of the significance of diseased tonsils, pyorrhea, dental caries, defective hearing and vision, eye diseases, varicocele, hydrocele, varicose veins, blood pressure, weight and hernias.

Applicants with hernia should be disqualified, but doctors often disagree as to whether a person has or has not a hernia. Usually the disagreement results in a difference of the conception of a hernia, and this is a problem which should be settled as quickly as possible. It can be done, and this section should initiate the movement for the appointment of a committee by the American Medical Association to study and define hernias, and its recommendations should be nationally adopted as a standard guide for industrial surgeons, industrial commissions, and courts.

The examiner is the "goat" when an applicant is disqualified. The applicant holds him responsible for losing his job and the ill will of a large number of disqualified applicants is costly to the doctor. It is costly to the doctor when an employee that he has qualified causes his company trouble. The examiner is blamed for that, too, and he should be if his examination has been careless or hasty, for such examinations are worse than none at all.

This paper is presented in the hope that those interested in industrial health will realize that only through the proper selection of employees and the establishment of sanitary and hygienic working environments can the objectives of industrial medicine be realized.

500 First National Bank Building.

ABSTRACT OF DISCUSSION

Dr. Carl A. Nau, Austin: In this country the value of physical examinations does not seem to be questioned very often. Naturally, the findings are to be used to properly place men in work for which they are fit. Actually, the findings are often used to keep men from jobs and because of such results, organized labor in general in Texas opposes such examinations. I think every clear thinking individual can see why they have a right to object.

North Carolina has required physical examinations, including a flat roentgen plate of the chest, of every employee in a dusty trade for the past three years. These examinations are made at least once every two years at State expense.

In Wisconsin, physicians, employers, and employees have recently agreed upon a plan of examination for all workers. The cost of such examination is paid by Industry. The examination is conducted by any physician Industry chooses. Both employee and employer are given a very brief report of major abnormalities and defects. The family physician may receive the complete report.

The English and Australians do not accept preemployment examinations as good practice. They believe every man has a right to a job. If he suffers while employed, Industry must pay and can in turn add the cost to the price of the commodity. It appears that the choice lies in which way we want to spend our dollar. In either case, the consumer eventually pays.

PELLAGRA—ITS ECONOMIC IMPORTANCE*

W. A. HUTCHINSON, M. D.
TEXARKANA, TEXAS

The first description of pellagra is generally credited to Gasper Casal, physician to Philip V of Spain, who, in 1735, in the neighborhood of Oviedo in the principality of the Asturias, first observed some cases of what he regarded as a peculiar form of leprosy, which was known to the people of the locality as "mal de la rosa." These observations were not published until 1762, about three years after Casal's death. Some knowledge of them was made known, however, in 1755, by Thieri, a Frenchman and physician, who, in the course of a visit to Madrid, learned of the disease, he states, from Casal himself.

Nine years after the posthumous publication of Casal's observations, we have the first report of the disease in Italy, in a memoir by Francesco Frapolli of Milan (1771). Here we have for the first time in the literature, the name by which it is known at the present time—pellagra.

Within a few years after Frapolli's publication, it was found that this disease was widely prevalent in northern Italy. This led to the establishment in 1784 at Legnano, of the first special hospital for its study. It was here that Gaetano Strambio (Sr.), who was put in charge, made his famous studies.

Outside of Italy and Spain, pellagra was not heard of until 1829, when Hameau reported his observations made in the vicinity of Teste de Buche, Department of the Girande, in the southwest of France. In 1874, there is mention by Pruner-Bey of the existence of the disease in Cairo, Egypt, and in 1858 we learn through Theodori of its presence in Rumania.

It is of interest to note that the relation

*Read before the Section on Public Health, State Medical Association of Texas, Dallas, May 14, 1940.

of the "mal de la rosa" of Casal to the "pellagra" of Frapolli was long in dispute. It was not until 1849 that their identity was established by the investigations of Roussel. Although, as we see, the endemic prevalence of pellagra has long been known in Europe, definite knowledge of its endemic occurrence in the western hemisphere, dates only from 1896 when Vales published his thesis on pellagra in Yucatan, Mexico. It is of interest to note, however, that three years before this, Bowen, under the name of psilosis pigmentosa described as prevalent in Barbadoes, what he believed to be either a new disease or one closely allied to Thin's "psilosis linguae et intestini" (*i. e.*, sprue), but which was to be recognized as pellagra. These reports of the endemic prevalence of the disease in the New World were antedated by a few reports of sporadic cases, the earliest of which was that reported by Gray, in 1864 from Utica, N. Y.

Up to 1907-1908, it was believed that pellagra did not occur endemically in the United States. Early in July, 1907, there was reported by G. H. Searcy an epidemic of eighty-eight cases which had occurred at the Mt. Vernon, Alabama, Insane Hospital in the late summer and early fall of 1906. Shortly after this, a case was reported by F. C. Merril from Texas and late in the same year J. W. Babcock recognized the disease at the State Hospital for the Insane at Columbia, S. C., publishing his observations early in 1908. From this on, the disease began to be recognized in a rapidly increasing number of localities. Within a year, the disease was reported from thirteen states and by the end of 1909 this number of states was doubled.

Pellagra has now been reported from all the States in the Union but it is especially prevalent in the region south of the Potomac and Ohio rivers. Credit for identifying the American disease with the disease as it occurs in Italy, is due to J. W. Babcock of Columbia, S. C.

Although only a very few sporadic cases were recognized in the United States prior to 1907-1908, there is reason to believe that the disease has prevailed in a higher degree and for a much longer period than was at first thought. Babcock believes that it occurred in the South Carolina State Hospital as far back as 1828. Just how prevalent it was prior to 1908-1909 it is impossible to state, but it is perhaps important to recognize that it may have prevailed to a considerable degree without definite recognition.

Following this introduction, let me say that this study was not made with the intention of adding anything new from a scientific standpoint to our knowledge of pellagra. I think that this subject has been covered with great thoroughness both as to etiology, symptomatology and treatment by many eminent writers, and I do not intend to bring up the few controversial points that still remain.

This study is largely statistical and one which I hope to continue further in the years to come, as there are several sidelights which give promise of being quite interesting. For the collection of these data, I have consulted the vital statistics of Texas, Arkansas, Oklahoma, and Louisiana. I am indebted to the Health Departments of these states for their coöperation in this matter. It is needless to state that the number of cases reported do not constitute a fair index of our pellagra rate, as most busy general practitioners, through unintentional oversight, do not report these cases as conscientiously as they do the acute contagious diseases.

Pellagra is a preventable and, in its early stages, certainly a curable disease; and one which, with proper educational and dietetic treatment, could be reduced to the status of a medical rarity. Statistics concerning the prevalence of pellagra in Arkansas, furnished by the Board of Health of that State are given in Table 1.

TABLE 1.—*Pellagra in Arkansas.*

Year	Cases	Deaths
1937	463	148
1938	850	184
1939	672	Not compiled

The Department of Health of the State of Louisiana provided the data on pellagra cases in that State, given in Table 2.

TABLE 2.—*Pellagra in Louisiana.*

Year	Cases	Deaths
1935	218	136
1936	161	115
1937	159	101
1938	249	148
1939	113	Not compiled

Special surveys were made in several parishes of Louisiana in 1930 and 1931, and the number of cases reported were 720 and 1,430, respectively. This shows, to my mind, probably a more accurate picture of the situation.

The Health Department of the State of Oklahoma reports the data given in Table 3.

TABLE 3.—*Pellagra in Oklahoma.*

Year	Cases	Deaths
1935	212	113
1936	201	169
1937	172	106
1938	252	110
1939	191	95

From our own State of Texas, pellagra deaths alone are shown in Table 4.

When we consider the statistics in the accompanying tables we cannot help but be struck by the fact that they represent an economic loss which appears to be largely

unnecessary. As it is natural with a largely rural population, dietary habits will vary according to the seasons of the year, and whether or not there have been droughts, floods, or other disasters which determine the actual production of foods consumed at home.

TABLE 4.—*Pellagra Mortality in Texas 1934-1938.*

Year	Deaths
1934	506
1935	615
1936	658
1937	509
1938	543

It has long been known that many persons, if left to themselves, will choose a faulty diet even if a correct one is available. From this standpoint, education is, of course, our weapon of choice, but the figures given indicate that we have not obtained the results we should have during the past five years.

During all these years, we have had with us, the so-called direct or food relief, which is supposed to cover a basically sound diet. Taking this into consideration, it would seem that the death rate from pellagra should show a steady decline, and there should be a diminution in the number of cases reported each year. That this is not the case, is probably the fault of the people themselves to some small degree, but the major fault appears to be in our system of distribution, whereby a balanced minimum diet should be made available. A closer coöperation between our Health Departments and the relief and charitable agencies dealing with food issuance, would go a long way toward constituting a remedy.

From the State of Texas, I obtained data concerning admissions to the Institutions for the Insane, which are given in Table 5.

TABLE 5.—*Admissions to Texas Hospitals for the Insane, Showing the Proportion of Pellagra Cases.*

Year	Total Admissions	Pellagra Cases
1934	2,402	35
1935	2,314	38
1936	2,396	58
1937	2,317	41
1938	2,993	59

These data were not obtainable from the other three states, and while pellagra cases are a small percentage of the total admissions, one cannot help but be struck by the fact that this represents an actual economic loss, and one which costs the State of Texas a considerable amount of money each year. These institutions are crowded. If these cases alone could be prevented, we could, in a small way, assist in relieving this overcrowding.

Pellagra, being due to a lack of vitamins, is closely connected with the entire field of avitaminosis. All the vitamin-deficiency diseases are of long duration, causing marked debilitation. It would seem that with the means at our command, a great deal of actual saving could be effected, and, therefore, funds could be released for use in other lines if some more positive steps could be taken to eradicate this condition. This would seem especially true in the light of the fact that all states are now giving particular attention to the subject of diets in their penal and correctional institutions, where pellagra was once a very common disease, and is now a comparative rarity.

MISCELLANEOUS

COMING MEETINGS AND CLINICS

State Medical Association of Texas, Fort Worth, May 12-15, 1941. Dr. Preston Hunt, Texarkana. President; Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth. Secretary.

American Medical Association, Cleveland, June 2-6, 1941. Dr. Nathan B. Van Etten, New York, President; Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Southern Medical Association. Dr. Arthur T. McCormack, Louisville, Kentucky, President C. P. Loranz, Empire Building, Birmingham, Alabama, Secretary-Manager.

Texas Allergy Association, Fort Worth, May 12, 1941. Dr. Boen Swinny, Medical Arts Building, San Antonio, President; Dr. Homer Prince, Medical Arts Building, Houston, Secretary.

Texas Ophthalmological and Otolaryngological Society, Fort Worth, December 13 and 14, 1940. Dr. J. W. Ward, Greenville, President; Dr. Dan Brannin, Medical Arts Building, Dallas, Secretary.

Texas Radiological Society, Sherman, January 18, 1941. Dr. C. F. Crain, Corpus Christi, President; Dr. L. W. Baird, Temple, Secretary.

Texas Club of Internists, Houston, 1941. Dr. Carl Lovelace, Waco, President; Dr. George Herrmann, Medical College, Galveston, Secretary.

Texas Association of Obstetricians and Gynecologists, Galveston, 1941. Dr. H. Reid Robinson, Galveston. President; Dr. Julius McIver, 1314 Medical Arts Building, Dallas, Secretary.

Texas Pediatric Society, Fort Worth, May 14, 1941, Dr. C. P. Jasperson, Corpus Christi, President; Dr. Frank Lancaster, 4409 Fannin Street, Houston, Secretary.

Texas Neurological Society, Fort Worth, May 12, 1941. Dr. Wilmer Allison, Fort Worth, President; Dr. Melbourne J. Cooper, Nix Professional Building, San Antonio, Secretary.

Texas Railway and Traumatic Surgical Association, Fort Worth, May 12, 1941. Dr. G. V. Brindley, Temple, President; Dr. Ross Trigg, First National Bank Building, Fort Worth, Secretary.

Texas State Pathological Society, Dallas, Jan. 26, 1941. Dr. Geo. T. Caldwell, Dallas, President; Dr. M. D. Bell, 1109 Medical Arts Building, Dallas, Secretary.

Texas State Heart Association, Fort Worth, May 12, 1941. Dr. Joseph Kopecky, San Antonio, President; Dr. V. E. Schulze, San Angelo, Secretary.

Texas Dermatological Society, Fort Worth, May 12, 1941. Dr. W. A. Smith, Beaumont, President; Dr. Duncan O. Poth, 1230 Nix Professional Building, San Antonio, Secretary.

Texas Surgical Society, Temple, April 7 and 8, 1941. Dr. W. L. Crosthwait, Waco, President; Dr. Walter Stuck, 1426 Nix Professional Building, San Antonio, Secretary.

Texas Orthopedic Society, Fort Worth, May 12, 1941. Dr. W. B. Carrell, Dallas, President; Dr. Ruth Jackson, Medical Arts Building, Dallas, Secretary.

Texas Association of Medical Anesthetists, Fort Worth, May 12, 1941. Dr. Thomas H. Compere, Houston, President; Dr. R. A. Miller, 1415 Nix Professional Building, San Antonio, Secretary.

Texas Society of Gastro-enterologists and Proctologists, Fort Worth, May 12, 1941. Dr. M. O. Rouse, Dallas, President; Dr. Tom E. Smith. 1207 Medical Arts Building, Dallas, Secretary.

Texas Mental Hygiene Association, San Antonio, February, 1941. Dr. Paul White, Austin, President; Dr. Evelyn M. Carrington, Huntsville, Secretary.

Texas Tuberculosis Association, San Antonio, May 5-8, 1941. Dr. E. G. Faber, Tyler, President; J. W. Butler, Galveston, Secretary.

Texas Public Health Association, Corpus Christi, 1941. Dr. George A. Gray, Sweetwater, President; Mr. Alan C. Love, Austin, Travis County Health Unit, Austin, Secretary.

Second District Medical Society. Dr. W. V. Ramsey, Abilene, President; Dr. W. T. Sadler, Merkel, Secretary.

Third, Panhandle, District Medical Society, Amarillo, April 8 and 9, 1941. Dr. F. A. White, Childress, President; Dr. H. H. Latson, 301 Polk St., Amarillo, Secretary.

Fourth District Medical Society, San Angelo, October, 1941. Dr. O. H. Chandler, Ballinger, President; Dr. F. T. McIntire, San Angelo, Secretary.

Fifth and Sixth, Southwest District Society, Laredo, 1941. Dr. T. E. Christian, San Antonio, President; Dr. W. W. Bondurant, Jr., 1512 Nix Professional Building, San Antonio, Secretary.

Seventh, Austin District, Austin, February 11, 1941. Dr. Joe A. Shepperd, Burnet, President; Dr. A. L. Nanny, Marble Falls, Secretary.

Eighth, Ninth and Tenth District Medical Society, Houston, 1940. Dr. Walter D. Brown, Beaumont, President; Dr. A. A. Ledbetter, Medical Arts Building, Houston, Secretary.
Eleventh District Society, Tyler, 1941. Dr. Clayton Shirley, Tyler, President; Dr. C. C. McDonald, Tyler, Secretary.
Twelfth, Central Texas District Society, Waco, Jan. 14, 1941. Dr. Dan Warren, Waco, President; Dr. R. K. Harlan, Temple, Secretary.
Thirteenth, Northwestern District Society, Bowie, March 11, 1941. Dr. J. Edward Johnson, Mineral Wells, President; Dr. Charles H. McCollum, Jr., 210 Mid-Continent Building, Fort Worth, Secretary.
Fourteenth District Society, Greenville, Dec. 4, 1940. Dr. Ira L. Thomas, Gainesville, President; Dr. R. S. Usry, 1835 Garrett, Dallas, Secretary.
Fifteenth, Northeast District Society, Longview, October 14, 1941. Dr. Hugh M. Ragland, Gilmer, President; Dr. J. N. White, Texarkana, Secretary.

CLINICS

Post Graduate Medical Assembly of South Texas, Houston, December 3, 4, and 5, 1940. Dr. J. E. Clarke, Medical Arts Building, Houston, President; Dr. Cornelius Pugsley, 1801 Second National Bank Building, Houston, Secretary.
Dallas Southern Clinical Society Conference, Dallas, March 17-20, 1941. Dr. Everett C. Fox, Medical Arts Bldg., Dallas, President; Dr. C. H. Warren, 1133 Medical Arts Bldg., Dallas, Secretary.
International Post-Graduate Medical Assembly of Southwest Texas, San Antonio, January 28, 29, and 30, 1941. Dr. J. Layton Cochran, 1126 Medical Arts Building, San Antonio, President; Dr. Charles L. McGehee, 723 Medical Arts Building, San Antonio, Secretary.

BUILDING HOSPITALS

"The impression prevails and in certain circles is widely promoted that hospital construction has halted during the depression," *The Journal of the American Medical Association* for Nov. 16 says. "True, many of the sources from which income for hospital building is drawn in prosperous times have lessened their flow. However, the WPA in a 'Report of Work Completed, 1935-1940' relates that during this period 132 new hospitals have been constructed, 1,592 have been reconstructed or improved and additions have been made to 222. Up to June 1939 the PWA in its report 'America Builds,' page 143, states that 'PWA has provided 121,760 beds in hospitals costing $367,659,880.' The technical committee which reported to the National Health Conference, and from which report much of the impression has proceeded, estimated that a normal increase in hospital beds should be 25,000 a year. Since the PWA alone provided 121,760 beds in five years, it should be evident that the alarm of the National Health Conference with regard to hospital construction is somewhat lacking in justification."

WEST TEXAS POSTGRADUATE ASSEMBLY

The West Texas Postgraduate Assembly will be held December 20, at the Wooten Hotel, Abilene, under the sponsorship of the Taylor-Jones County Medical Society. Guest speakers for the Assembly will be Dr. George Herrmann, professor of medicine, University of Texas School of Medicine, Galveston, and Dr. Alton Ochsner, professor of surgery, Tulane University, New Orleans, La.

Dr. Wayne V. Ramsey, chairman of the program committee, announces that the program will be presented in two sessions, the morning session consisting of case presentations and the afternoon session being devoted to formal papers—the entire program being presented by the guest speakers, as follows:

Procedure and Methods in Heart Examination—George Herrmann, M. D.
Peptic Ulcer—Alton Ochsner, M. D.
Pyonephrosis, Hypertension and Convulsions—George Herrmann, M. D.
Intestinal Obstruction—Alton Ochsner, M. D.
Primary Anemia—George Herrmann, M. D.
Lung Abscess—Alton Ochsner, M. D.
Thrombophlebitis and Phlebothrombitis—Alton Ochsner, M. D.
Sudden Cardiovascular Disturbances, Recognition and Management—George Herrmann, M. D.

Dr. Stewart Cooper, Abilene, will conduct a round table discussion at luncheon, members asking questions and the guest speakers responding.

A banquet will be held in the evening at the Wooten Hotel for attending physicians and their wives, with Dr. N. D. Buie, President-elect of the State Medical Association, as guest speaker. A dance will follow the dinner.

LABORATORY COURSE FOR TECHNICIANS

Dr. S. W. Bohls, director of the laboratories for the Texas State Department of Health, will hold a series of week-end courses for laboratory technicians at the laboratory of the State Department of Health in accordance with the following schedule: November 22-23; December 6-7; December 13-14; January 3-4; January 10-11; January 31-February 1; and February 7-8.

The purpose of the school is to make available to laboratory technicians the newer methods of technique and procedures employed in the diagnosis and treatment of pneumonia. If a sufficiently large number of technicians is interested in any of the various larger cities of the state, Dr. Bohls states that it may be possible to arrange for three-day courses in such cities, thus bringing the courses to the technicians rather than requiring the technicians to come to Austin for such instruction. These courses of instruction of technicians are conducted in cooperation with the Pneumonia Control Committee of the State Medical Association, of which committee Dr. Joe Kopecky of San Antonio is chairman and Dr. Bohls is secretary.

STATE MEDICAL ASSOCIATION PNEUMONIA CONTROL COMMITTEE MEETING

The State Medical Association Advisory Committee on Pneumonia Control met September 22, in the Driskill Hotel, Austin, with the following members present: Drs. Joe Kopecky, San Antonio, chairman; H. M. Winans, Dallas; C. T. Stone, Galveston; DeWitt Neighbors, Fort Worth; and S. W. Bohls, Austin. Others attending the meeting included Dr. John W. Brown, City Health Officer, Houston; Dr. J. W. Bass, City Health Officer, Dallas; Dr. W. G. Maddox, Assistant Professor of Clinical Medicine, Baylor University, Dallas; and Dr. J. T. Kroulik of the Bureau of Laboratories, State Department of Health.

Chairman Kopecky reviewed the policy under which the committee had operated during the past year, emphasizing that the pneumonia control program was strictly under the supervision of the State Medical Association and the State Department of Health. In order to obtain reliable records and statistics the program was limited last year, at first, to hospitals in San Antonio, Houston and Dallas.

Secretary Bohls, Austin, then gave briefly a report of activities of the various pneumonia centers last year.

In San Antonio, the only hospital participating was the Robert B. Green Hospital. In this institution there were 96 cases of pneumonia, in which cases typing was done in 59 per cent. Type 1 predominated with type 3 in second place and type 15 in third place. There were 43 cases of lobar pneumonia, 45 cases of bronchopneumonia, and 5 cases of atypical pneumonia. The mortality rate was 11.45 per cent.

Excellent work was done in the following Dallas hospitals participating in the program: Bradford Memorial, Parkland and St. Paul's. Dr. W. G. Reddick should be given considerable credit for the scientific work at Parkland Hospital where 94 per cent of pneumonia cases were typed. Considering the cases in Dallas hospitals as a group, 87 per cent of the pneumonia cases entering were typed with a mortality rate of 3.18 per cent. This group included 212 lobar pneumonias, 199 bronchopneumonias, and

39 atypical pneumonias. The predominating type was type 1, with type 7 and type 14 second and third, respectively.

In Houston, Jefferson Davis and Hermann Hospitals participated. Of 238 cases, 32 per cent were typed with a mortality rate of 6.72 per cent. There were 65 cases of lobar pneumonia, 46 cases of bronchopneumonia and 7 cases of atypical pneumonia. The predominating type was type 1, with type 7 second, and type 5 third.

During the latter part of the year hospitals in Galveston, El Paso and Austin participated in the program. At John Sealy Hospital, Galveston, 86 cases of pneumonia were reported, consisting of 20 cases of lobar pneumonia, 58 cases of bronchopneumonia and 3 cases of atypical pneumonia. Of these cases typing was done in 92 per cent and the mortality rate was 3.48 per cent.

In a series of 771 cases, bacteremia occurred in 8.04 per cent with a mortality rate of 14.51 per cent. In a series of 892 cases, twenty-five deaths occurred in children under 10 years of age, while thirty-four deaths occurred in adults, of which group 14 patients were above the age of 50. It was noted that most of the deaths in children occurred in the Robert B. Green Hospital, San Antonio, and that the children were under the age of 2 years.

A total of 7,563 Gm. of sulfapyridine was used in a series of 567 cases, an average of 18 Gm. per case. The average blood concentration for sulfapyridine was 6.3 mg. per cent. The temperature became normal, on the average, thirty-eight hours after the treatment was started. In the fatal cases, due to bacteremia, type 1 pneumococcus was found in three instances. Types 4, 6, 7 and 11 were found in other cases.

Chairman Kopecky reminded the committee that the program required a certain amount of laboratory work and that interns and resident physicians of participating hospitals must be fully informed regarding the program in order that reliable statistical data and accurate records may be kept. The committee voted that any institution which does not comply with 80 per cent of the minimum requirements of the committee in regard to the program should have the facilities of the pneumonia control program withdrawn.

At the request of Dr. DeWitt Neighbors, a member of the committee, it was voted to extend the program to include the City-County Hospital, Fort Worth, and hospitals in other cities which would coöperate.

Dr. H. M. Winans suggested that educational features of the program be extended.

Dr. C. T. Stone moved that an abbreviated form of the booklet, "Clinical Aspects of Pneumococcus Pneumonia" be made available for widespread distribution throughout the State. Dr. C. T. Stone and Dr. Bohls were requested by Chairman Kopecky to prepare "A Primer on Pneumonia."

Dr. John Brown, City Health Officer of Houston, asked the committee if the program could be extended to the low income group. Chairman Kopecky replied that services in connection with the program were restricted to hospital cases since the funds allocated were not sufficient to make the program available to patients outside of hospitals or to any group other than the indigent.

On motion of Dr. C. T. Stone, the committee voted that all county medical societies in the State be contacted and requested to devote one meeting during the pneumonia season to "Modern Aspects of Pneumonia."

Representatives of Lederle Laboratories were given the privilege of explaining their services in the distribution of serum and drugs. If Lederle products were used in the program, they agreed to stock supplies at strategic points throughout the State in order that there would be no delay in day or night delivery service. It was voted that the method of distribution of serum and drugs be arranged and directed by the director of the Pneumonia Control Program.

Dr. H. M. Winans expressed the opinion that efforts should be made to change the present classification of pneumonias and recognize the pneumonias only according to the etiologic agent. The committee voted to go on record as favoring such a movement.

There was a full discussion concerning the use of sulfapyridine and sulfathiazol. On motion by Dr. H. M. Winans it was voted that, for the coming year, it shall be the policy of the committee to use sulfapyridine, but in special instances sulfathiazol may be supplied.

On motion of Dr. DeWitt Neighbors it was voted that Dr. H. M. Winans and Dr. S. W. Bohls be empowered to revise the booklet "Clinical Aspects of Pneumococcus Pneumonia" so as to include the more recent information.

On motion of Dr. C. T. Stone it was voted that the motion picture film, "A New Day," furnished by the Metropolitan Life Insurance Company, be placed in the theaters of Texas for showing during the months of November and December, if available at that time.

The committee voted that the certificate of approval for hospitals be given only to hospitals that participated satisfactorily in the program.

Chairman Kopecky called on the city health officers present to discuss the operation of the pneumonia program in their respective cities. Dr. Bass, of Dallas, expressed his gratification regarding the operation of the program in that city and stated that their hospitals would try to do as well in the present as in the past year. Dr. John Brown, Houston, assured the coöperation of the participating hospitals in Houston.

The committee agreed that a symposium on pneumonia should be prepared for the program of the next annual meeting of the State Medical Association, and that such program should include an exhibit, as well as guest speakers on the subject of pneumonia. Dr. C. T. Stone was appointed to assume the responsibility for such arrangements.

The committee will hold its next meeting January 12, 1941, at Austin.

VITAMIN P IS EFFECTIVE FOR PURPURA

Treatment with vitamin P proved effective in two cases of allergic purpura (minute hemorrhages under the skin), one of infectious and one of nutritional purpura, I. Newton Kugelmass, M. D., New York, reports in *The Journal of the American Medical Association* for August 17.

Vitamin P is found in the natural yellow pigment of fruits and vegetables. It affects the tone or elasticity of the capillaries or minute blood vessels of the body.

The allergic purpura in one child was found to be due to oversensitivity to certain foods. The instance of infectious purpura followed scarlet fever and the child suffering from the nutritional type was a premature infant who did not thrive on any milk formulas or breast feeding. The purpura of these patients cleared after vitamin P treatment.

WARNS PHYSICIANS OF SWINDLING BY PEDDLERS OF NARCOTICS

"From the Bureau of Narcotics in Washington comes a warning from the Commissioner, Mr. H. J. Anslinger, which should be widely disseminated among physicians and their families," *The Journal of the American Medical Association* for Nov. 23 reports. "Illicit traffickers in narcotics have in some

instances recently developed a technic with which they were able to swindle either the widows or members of the families of physicians who had recently died. Apparently these peddlers watched the daily papers for the notices of deaths of physicians. Shortly after the publication of such a notice of death the trafficker appeared and represented himself to be 'a narcotic appraiser,' stating that he represented a federal agency and seeking to induce the survivors of the physician to turn over to him whatever narcotics might be found among the effects of the deceased. Thus far attempts have been made only on the families of physicians. It seems probable, however, that a similar attempt might be made in connection with stocks of narcotics held by druggists. Physicians and druggists everywhere should be warned against this type of fraud."

LIBRARY NOTES

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Requests for packages should be addressed "Library, State Medical Association of Texas, 1404 W. El Paso Street, Fort Worth, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Only one package may be borrowed at a time, and packages are allowed to remain in the hands of the borrower for 14 days.

Package Service

Packages were mailed to the following from the Library of the State Medical Association during November:

Dr. J. Jerome Moch, Longview—*Vitamins, blood and urine determination* (13 articles).

Dr. C. D. Strother, Sherman—*Pylorus, hypertrophy and stenosis* (24 articles).

Dr. L. W. Johnston, Terrell—*Pancreatitis* (28 articles).

Dr. Heinrich Lamm, La Feria—*Perineum* (13 articles); 2 books; *Spine, intervertebral disks and Spinal Canal, roentgenography* (25 articles).

Dr. E. D. Rice, Tyler—*Medicine, socialized* (13 articles).

Dr. R. W. Holton, Terrell—*Intestines, diverticula* (14 articles); *Colitis, ulcerative* (17 articles).

Dr. Douglas Moore Bush, Dallas—*Uterus, cervix* (12 articles); *Leukorrhea* (11 articles).

Dr. S. W. Mantzel, Giddings—*Osteo-arthritis* (16 articles).

Dr. F. T. McIntire, San Angelo—(2 journals, 1 book); (4 journals).

Dr. Walter D. Brown, Beaumont—*Sacrum, tumors* (8 articles).

Dr. O. W. English, Lubbock—*Gastro-intestinal Tract, abnormalities* (26 articles).

Dr. Fred Harrell, Olney—*Coccyx* (9 articles); (1 journal).

Dr. A. D. Wages, Palestine—*Nerves, acoustic* (10 articles).

Dr. E. T. Bickley, Corpus Christi—*Sulfathiazol, toxicity* (3 articles).

Dr. R. J. Rowe, Jr., Kaufman—*Hand, infections* (14 articles).

Dr. Sidney Galt, Dallas—(2 journals).

Dr. Donald H. McDonald, Abilene—*Children* (3 articles).

Dr. C. B. Shaddock, Beaumont—*Negroes, diseases* (31 articles).

Dr. Robert Hargrave, Wichita Falls—*Contracture, Dupuytren's* (8 articles).

Dr. Chas. A. Smith, Texarkana—*Angina, agranulocytic* (28 articles).

Dr. Joseph R. Story, Victoria—*Tularemia* (30 articles).

Dr. E. C. Stoeltje, Rosebud—*Vertigo, aural* (1 article).

Miss Janice Lindeman, Austin—*Medicine, socialized* (4 articles).

Dr. M. W. Rogers, Rule—*Typhus* (24 articles).

Dr. A. B. Goldston, Amarillo—*Pylorus, obstruction* (20 articles).

Dr. S. W. Hughes, Brownwood—*Goiter, Exophthalmic* (21 articles).

Dr. H. A. Scott, Austin—*Anesthesia, paraldehyde* (13 articles).

Dr. Elmo Alexander, Lubbock—*Fingers and Toes, hallux valgus* (1 article).

Dr. Ben F. Harrison, Dallas—*Uterus, cervix* (12 articles); *Leukorrhea* (11 articles).

Dr. O. R. Goodall, Memphis—*Undulant Fever* (28 articles).

Dr. Charles H. Brown, Wichita Falls—*Heart, abnormalities* (19 articles).

Dr. T. D. Young, Roscoe—*Mouth, diseases* (16 articles).

Dr. S. H. Watson, Waxahachie—*Thrombosis, sinus* (12 articles).

Judge C. T. Freeman, Sherman—*Medical Service Plans* (10 articles).

Dr. F. A. Prather, Runge—*Monsters* (17 articles).

Dr. Conrad Frey, Crane—*Public Health and Socialized Medicine* (20 articles).

Dr. J. W. Gooch, Shamrock—*Heart, electrocardiography* (7 articles).

Dr. Paul K. Conner, Jacksboro—(1 journal).

Dr. Otto Lippman, Austin—*Retina, detached* (9 articles).

Dr. Heinrich Lamm, La Feria—*Epididymitis, tuberculous* (8 articles).

Dr. Harry Jacobson, Post—*Blood Transfusion* (28 articles).

Dr. Boyd Alexander, Waco—*Burns, therapy* (22 articles).

Dr. J. J. Crume, Amarillo—*Spider Bites* (15 articles).

Dr. C. D. Lindley, Carrizo Springs—*Testicles, undescended* (26 articles).

Dr. R. B. Anderson, Waco—*Insulin, therapy* (2 articles).

Dr. Thomas E. Cook, Dallas—*Jaws, cancer* (5 articles).

Accessions

Williams & Wilkins Co., Baltimore—Taber's Cyclopedic Medical Dictionary.

F. A. Davis Company, Philadelphia—Hunt: Diseases Affecting the Vulva.

American Proctologic Society—Transactions, 1940.

American Therapeutic Society — Transactions, 1940.

Scholastic Book Press, New York—Rosenberg: It Is Your Life.

The Year Book Publishers, Chicago—Painter: The 1940 Year Book of Industrial and Orthopedic Surgery; Karsner and Hooker: The 1940 Year Book of Pathology and Immunology.

Donation

Mr. O. Coffman, Fort Worth, Texas: History of Base Hospital 26.

Summary

Reprints received, 785.	Local users, 41.
Journals received, 129.	Borrowers by mail, 45.
Items consulted, 149.	Packages mailed out, 52.
Items taken out, 176.	Items mailed out, 720.
Total items consulted and mailed, 1,045.	

NEWS

Brownwood Physicians and Dentists were guests at a barbecue recently at the L. E. Shaw cabin on Lake Brownwood, compliments of the Brownwood Kiwanis Club. There was no set program or speeches.

Ennis Hospital staff elected the following officers at an organization meeting for the ensuing year: Chairman, Dr. A. J. Cox; vice-chairman, Dr. J. Lawrence Clark, and secretary, Dr. John M. Chapman.—*Ennis Local.*

The Southwestern Medical Association recently elected the following officers for the ensuing year: President-elect, Dr. C. A. Thomas, Tucson, Arizona; first vice-president, Dr. K. D. Lynch, El Paso, Texas; second vice-president, Dr. J. W. Hannett, Albuquerque, New Mexico; and secretary-treasurer, Dr. Louis W. Breck, El Paso, Texas.

Dr. William H. Woolston, Albuquerque, New Mexico, president-elect for the past year, was installed as president for the ensuing year.

The Southwestern Academy of Eye, Ear, Nose and Throat Surgeons, meeting in conjunction with the Southwestern Medical Association, elected Dr. Franklin H. Maury, Tucson, president, and Dr. A. E Cruthirds, Phoenix, secretary.

The Southwestern Medical Association will hold its 1941 convention in El Paso.—*Fort Worth Star-Telegram.*

Robertson County Venereal Disease Clinic.—Physicians of Robertson County recently approved the establishment of a venereal disease clinic in that county under the direction of the Robertson County Health Unit, states the Franklin *Favorite.* The clinic will be located at Hearne. Dr. W. M. Boguski and Dr. T. A. Searcy will serve as clinicians, and two clinics will be held each week for indigent patients with venereal disease. The personnel of the clinic other than the two clinicians will consist of a full time nurse for venereal disease work only, under the direction of Dr. Roy G. Reed, director of the Robertson County Health Unit.

The Electra Medical Clinic building was formally opened to the public October 20, advises the Electra *News.* The structure is one story, colonial style, white brick, and fireproof. The building contains sixteen rooms, including the clinical and x-ray laboratories, physiotherapy room and operating room. It will furnish office space for the owner, Dr. P. E. Fish, who will do general practice and surgery, and Dr. W. H. Ogden, who specializes in the treatment of eye, ear, nose and throat diseases. The building is air conditioned.

State Tuberculosis Sanatorium Staff Homecoming.—Dr. J. B. McKnight, superintendent, Texas State Tuberculosis Sanatorium, was host recently at a two-day homecoming party for former members of the Sanatorium staff. Thirty-five physicians and dentists and their wives were invited. About forty physicians and dentists have served on the staff since the institution was formally opened July 4, 1912, but a few of the former members now live in other states and were unable to attend. Practically all of the former Sanatorium physicians have specialized in the treatment of diseases of the chest.

Dr. and Mrs. McKnight entertained their invited guests and present members of the Sanatorium staff and their wives at the Sanatorium's Cottage for visiting physicians, on the first day. Separate luncheons were held for the physicians and their wives on the second day, with Dr. McKnight as host for the doctors and Mrs. McKnight as hostess for the wives, the latter luncheon being at the McKnight home. In the evening of the same day a barbecue picnic for the physicians and Sanatorium employees was held on the North Concho River.—San Angelo *Standard-Times.*

The Lutheran Hospital, Cuero, the former Reuss Memorial Hospital, is now under the management of Dr. Robert G. Wagner and Dr. A. J. Bohman of Cuero, advises the Cuero *Record.* The hospital previously had been under the management of the late Dr. S. P. Boothe for many years, and prior to that time of its founder, Dr. J. M. Reuss, for whom it was originally named. Drs. Wagner and Bohman have selected as their resident staff in addition to themselves, Drs. G. A. King, J. C. Dobbs, Marvin Duckworth, and W. E. Douthit. The institution will be open to all regular licensed physicians who are members of their county medical societies.

Liberty County Given Clinic Building.—The Commissioners' Court of Liberty County formally accepted November 4, the gift of a clinic building from Miss Yettie Kersting of Liberty, it being agreed that the building will be equipped and maintained by the county, states the Liberty *Vindicator.* The proposal had been before the court for some time but action had been delayed awaiting a decision from the Attorney General of Texas. Miss Kersting's gift will provide a new medical clinic building, the construction cost of which will be $17,500; the balance of Miss Kersting's estate at her death will go to the county to operate the clinic, that amount being estimated in excess of $50,000. The State and Federal governments will furnish $4,000 to pay for the services of a doctor, nurse, secretary, record clerk, and medical supplies, and the county will furnish the maximum of $3,000 to furnish the clinic and to maintain it at a cost not to exceed $4,000 per year. Miss Kersting's gift was further coupled with the understanding that each physician in the county would give two hours each week in service to the clinic. Under the proposed plan no hospitalization would be offered. County hospital services would be continued at the Mercy Hospital. The project will call for no increase in the tax rate or bonded indebtedness of Liberty County. The equipment and maintenance cost will be paid out of the general fund.

Dallas Southern Clinical Society announces the following honor guest speakers for its thirteenth annual spring clinical conference:

Dr. C. J. Barborka, Chicago (Medicine).
Dr. W. Edward Chamberlain, Philadelphia (Radiology).
Dr. Harry Goldblatt, Cleveland (Pathology).
Dr. Leland S. McKittrick, Boston (Surgery).
Dr. Norman F. Miller, Ann Arbor (Obstetrics & Gynecology).
Dr. John J. Morton, Rochester, New York (Surgery).
Dr. Henry G. Poncher, Chicago (Pediatrics).
Dr. James C. Sargent, Milwaukee (Urology).
Dr. Marion B. Sulzberger, New York City (Dermatology).
Dr. Derrick Vail, Cincinnati (Ophthalmology).
Dr. Soma Weiss, Boston (Medicine).
Dr. Fletcher D. Woodward, Charlottesville, Virginia (Otolaryngology).

The Texas Pediatric Society held its fall clinical session, October 5, at Galveston. Clinical sessions were held at the University of Texas School of Medicine, and lectures at the Galvez Hotel.

Dr. Byron York, Houston, district chairman, presided at the clinical sessions.

Guest speakers were Dr. Lawson Wilkins, Johns Hopkins University, Baltimore, who discussed different phases of endocrinology and Dr. Louis A. Brunsting of the Mayo Clinic, Rochester, Minnesota, who spoke on common skin diseases.

At a business session, presided over by Dr. C. P. Jasperson, Corpus Christi, president, plaques were presented as certificates of merit for outstanding services to pediatrics in Texas, to Drs. H. Leslie Moore, Dallas; Talbot A. Tumbleson, Beaumont, and Frank H. Lancaster, Houston.

Social features in connection with the meeting included a boat sail on the launch Galvez, in the evening, and dinner and floor show following.

The Texas Club of Internists held its annual travel meeting at Boston, Massachusetts, October 21-25, with the following members present: Drs. Carl Lovelace, and Ralph Coffelt, Waco; Frederick Lummis, Hatch Cummings, Jr., and L. B. Duggan, Houston; K. H. Beall, W. Shelton Barcus, William L. Howell and John H. Sewell, Fort Worth; David Carter, Robert M. Barton, W. H. Potts, Sam A. Shelburne, J. Shirley Sweeney, and M. B. Whitten, Dallas; Joe Kopecky, Julian Barton, Edgar M. McPeak and David R. Sacks, San Antonio; L. C. Carter, Marlin; C. M. Darnall, Austin; William L. Marr, C. T. Stone, and George Herrmann, Galveston; Walter B. Whiting, Wichita Falls; and W. B. Adamson, Abilene.

The Club was cordially received and extended every hospitality. A splendid program revealing the fine work being done by Boston internists was presented at the Massachusetts Memorial Hospital and the Evans Memorial Hospital under the direction of Dr. Chester Keefer; at the Thorndike Memorial of Boston City Hospital, under the direction of Dr. George R. Minot and William B. Castle, October 21, at the Peter Bent Brigham Hospital under the direction of Dr. Soma Weiss, October 22; at the Deaconness Hospital under the direction of Dr. Frank Lahey and Dr. Lewis Hurxthal, October 23; at the Massachusetts General Hospital under the direction of Dr. James H. Means, October 24; and at the Deaconness Hospital and George F. Baker Clinic, under the direction of Dr. Elliott P. Joslin and Dr. Howard Root, October 25.

Texas internists discussed extensively each paper presented by the Boston internists. The next meeting of the Texas Club of Internists will be held in Houston in February, 1941.

The present officers of the Texas Club of Internists are Dr. Carl Lovelace, Waco, president, and Dr. George Herrmann, Galveston, secretary.

American Board of Obstetrics and Gynecology Examination.—The written examinations and review of case histories (Part I) for Group B candidates will be held in the various cities of the United States and Canada on January 4, 1941, at 2:00 p. m. Formal notice of the place of examination will be sent each candidate several weeks in advance of the examination date. No candidate will be admitted to examination whose examination fee has not been paid at the secretary's office. Candidates who successfully complete the Part I examination proceed automatically to the Part II examination to be held in June, 1941.

The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board, meeting at Cleveland, Ohio, from May 28 to June 1, 1941, immediately prior to the opening of the annual meeting of the American Medical Association.

Application for admission to Group A (Part II) examinations must be on file in the secretary's office not later than March 15, 1941.

After January 1, 1942, there will be only one classification of candidates, and all will be required to take the Part I and Part II examinations.

The Board wishes to announce a modification of the case record ruling (effective January 1, 1942) as it appears in the September 1940 issue of the Board booklet. This ruling should read: "It is preferable that the number of cases submitted should not be more than half (25) of the total number of fifty (50) cases required."

For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Penn.

New Library for St. Paul's Hospital, Dallas.—A new wing to the St. Paul's Hospital has just been completed which will house the library of that institution. This construction was made possible through a gift by Dr. S. M. Hill of Dallas, a staff member. The library contains over 3,000 medical books, many of which have been donated by members of the staff. The hospital will subscribe to about twenty-five leading medical journals, which will be kept annually current. A full time librarian will be in charge, and the facilities of the library will be made available to the attending physicians and interns of the hospital.

Postgraduate Courses in Obstetrics and Gynecology.—The Department of Obstetrics and Gynecology of the University of Chicago and the Chicago-Lying-in Hospital through the coöperation of the Children's Bureau, U. S. Department of Labor and the Illinois State Department of Public Health, offers five postgraduate courses of four weeks each between January 6 and June 21. The beginning dates of each are: January 6, February 10, March 17, April 21, and May 26. All the members of the department and all services and units of the institution participate in the instruction. Only a limited number of postgraduate students are accepted for each period. A deposit of $25.00 is required, of which $10.00 is returned on completion of the course. All communications should be addressed to: Postgraduate Course, 5848 Drexel Avenue, Chicago, Illinois.

The National Health Library, which completed two decades of service this year, announces its removal from the RCA Building in Rockefeller Center to 1790 Broadway, New York City. Since its establishment twenty years ago, this Library has brought together one of the best collections of source material in the United States on public health, sanitation, health education and related subjects. It includes 6,000 volumes and 30,000 pamphlets. More than 500 medical and public health periodicals are received regularly from all parts of the world.

Administered by the National Health Council, the Library is intended primarily for the use of the seventeen health organizations which are members of the Council. Individuals who are not members of the supporting organizations may have the privilege of using the Library by paying a small annual fee.

Personals

Dr. J. T. Harrington of Waco, who is serving his fifty-first year as a member of the board of trustees of Baylor University, was honored with a testimonial banquet at Waco, November 22, by the Baylor Ex-Student Association. Dr. Harrington has served as president of the board for the past eight years.

Dr. Herbert Thomason and *Dr. Hub E. Isaacks* of Fort Worth were recently elected commodore and fleet surgeon, respectively, of the Fort Worth Boat Club.

Dr. L. R. Wilson of Galveston recently tendered his resignation as superintendent of the John Sealy Hospital, advises the State *Observer*. The resignation is effective January 1. Dr. Wilson is leaving to accept the superintendency of the Episcopal Hospital at Philadelphia.

Dr. Charles H. Harris of Fort Worth was recently elected chairman of the board of trustees of the Mary Couts Burnett Trust for Texas Christian University. Dr. Harris is the only one of the five original trustees who retains membership on the board. He was appointed in 1923 when the trust was set up by Mrs. Burnett at an estimated value of $4,000,000 with a potential value of $10,000,000, states the Fort Worth *Star-Telegram*.

Colonel J. W. E. H. Beck of De Kalb was appointed state medical officer for the selective service system in Texas by Governor W. Lee O'Daniel, October 31, informs the Austin *American*. Colonel Beck assumed his duties with the selective service October

21. He is serving on detached service from the 111th medical regiment.

Dr. H. Frank Carman of Dallas was recently elected president of the Southern Tuberculosis Conference at its annual meeting in Monroe, Louisiana, advises the Dallas *Journal*. Dr. Carman is chairman of the executive committee of the Texas State Tuberculosis Association, a member of the board of directors of the National Tuberculosis Association, chairman of the committee on tuberculosis among Spanish speaking people for the National Tuberculosis Association, and a member of the Committee for the American Trudeau Society, a scientific branch of the National Tuberculosis Association.

Dr. H. J. Kaplan, Orange, is taking postgraduate work in the specialty of eye, ear, nose and throat, at New Orleans. After completing his studies Dr. Kaplan will return to Orange and limit his practice to this specialty, advises the Orange *Leader*.

Bryce Twitty, former superintendent of Baylor Hospital, and until recently director of the Group Hospitalization Incorporated, was tendered an appreciation dinner recently by a group of physicians at the home of Dr. George A. Schenewerk, Dallas. Mr. Twitty resigned his directorship to take over the duties of administrator of the Hillcrest Memorial Hospital, Tulsa, Oklahoma, informs the Dallas *News*.

Dr. T. W. Williams, Haskell, former city alderman, was recently unanimously elected president of the library board of that city, states the Haskell *Free Press*.

Dr. Vance Terrell of Stephenville is taking postgraduate work in eye, ear, nose and throat in Cleveland, Ohio; and Dr. A. G. Barsh of Stephenville is taking a month's postgraduate study in radiology in Stanford University, San Francisco, advises the Stephenville *Empire-Tribune*.

Col. John J. O'Reilly, Fort Worth, division surgeon and commander of the 111th medical regiment, will be in charge of the one thousand bed army post hospital to be established in Brownwood, training site of the 36th Division, Texas National Guard, according to the Fort Worth *Star-Telegram*.

Dr. Curtice Rosser, Dallas, was recently appointed member of the Council of the Southern Medical Association from Texas for the regular council term of five years, succeeding Dr. Guy F. Witt, Dallas, who had served the constitutional time limit and was not eligible for reappointment.—*Southern Medical Journal*.

Dr. W. L. Rhodes and *Dr. S. K. Stroud* of Corpus Christi were recently elected president and secretary, respectively, of the Eye, Ear, Nose and Throat Society, a branch of the Nueces County Medical Society, reports the Corpus Christi *Times*.

Dr. George Herrmann, professor of medicine, University of Texas School of Medicine, Galveston, presented a paper, "The Modern Treatment of Congestive Heart Failure," at the Inter-State Postgraduate Assembly of North America, at Cleveland, Ohio, October 18. On October 31, Dr. Herrmann addressed the Mid-western Postgraduate Assembly in Omaha, Nebraska, on the subject, "The Clinical Study of Patients," led a round table discussion on "Pulmonary or Coronary Thrombosis-Treatment," and gave a clinic on "Peripheral Circulatory Disorders." At the Omaha-Douglas County Medical Society meeting Dr. Herrmann discussed "Common Cardiac Emergencies and Their Management."

Dr. Everett L. Goar, Houston, was elected vice-president of the American Academy of Ophthalmology and Otolaryngology at its annual meeting in Cleveland, October 6-10.

Dr. Titus H. Harris, Galveston, has been appointed regional chairman of the American Psychiatric Association committee on public education for the states of Texas, Louisiana, Arizona and New Mexico. The purpose of the committee is to coöperate with the press and otherwise to foster the dissemination of sound psychiatric information to the public.

Dr. Willard R. Cooke, Galveston, was recently elected member, director and examiner of the American Board of Obstetrics and Gynecology to fill the vacancy created by the resignation of Dr. Grandison D. Royston, St. Louis.

Marriages

Dr. Thomas L. Lauderdale to Miss Margaret Hornberger, both of Fort Worth, November 20, 1940.

Dr. W. P. Higgins, Jr. to Miss Ruth Connor, both of Fort Worth, November 21, 1940.

Dr. Bassel Nelson Blanton of Temple, to Miss Frances Carol Crain of Waco, October 30, 1940.

Dr. A. S. Epperson of Cameron, to Mrs. Jessie Burton Watson in Houston, October 10, 1940.

SOCIETY NEWS

Bexar County Society

October 3, 1940

(Reported by W. W. Bondurant, Jr., Secretary)

Hypertrophic Pyloric Stenosis in Infants: Result of Birth Injury—J. G. Flynn, Houston.

Bexar County Medical Society held its first fall meeting, October 3, in the Medical Library Building, San Antonio, with seventy-five members present. Herbert Hill, president, presided, and Lee Rice, chairman of the program committee, announced future programs and introduced the speaker of the evening, J. G. Flynn, Houston. David R. Sacks, chairman of the evening, presided during the scientific program.

Hypertrophic Pyloric Stenosis in Infants: Results of Birth Injury (J. G. Flynn).—This condition has been found with increasing frequency in the past few years. Seventy-two cases occurring in Houston in three years had been reviewed in which the diagnosis was made by x-ray, at operation or necropsy. In four cases, the condition was due to congenital bands causing atresia.

Etiologic theories that have been advanced include: (1) hypertrophy of the pylorus from spasm, (2) primary hyperplasia, (3) imbalance of the sympathetic nervous system, (4) trauma from overdistention, (5) autonomic incoördination in a hypertonic child, and (6) adrenalism, alkalosis, and so forth.

The clinical picture is that of a normal infant, 2 to 6 weeks of age, who slowly or rapidly becomes unable to retain feedings, with almost projectile vomiting. In four cases with atresia or bands, there was vomiting from birth.

In the seventy-two cases reviewed by the author sixty-three patients were males and nine females. Three infants were under nine pounds at birth and the average of all the infants at birth was eight pounds three ounces. In sixty-nine cases, the deliveries were vertex, two were breech presentations, and one was delivered by cesarean section.

All types and degrees of anesthesia were used in the deliveries. Low forceps and episiotomy was used in many cases. The length of stay in the delivery room was comparatively short, shorter than in births resulting in normal children. Precipitate labor was not a factor. Only one of the infants was delivered by a midwife. Sixty-one of the deliveries were in the hospital. The three leading obstriticians of Houston were conspicuously absent as accoucheurs in this series of cases. One physician had had two cases, and another physician had had four cases out of a total of twenty deliveries.

A lantern slide was exhibited illustrating traction on the neck in helping to deliver the anterior shoulder.

The Rammstedt operation offers less risk in the treatment of this condition and gives relief in a shorter period of time than any other method of treatment.

Two deaths in the series of cases were preventable, one from aspiration pneumonia, and one from strangulation on vomitus.

A pediatrician is a necessity in the proper handling of such cases. Of sixty-six cases in which operation was done there were six deaths. In thirty-four private cases the mortality was 7 per cent, and in thirty-two clinic cases it was 13 per cent.

Evidence of birth injury as a cause of this condition is substantiated by the fact that it occurs: (1) with large babies; (2) in cases of difficult delivery of the shoulder, and (3) when traction on the neck is employed. It is significant that it is not present at birth and these cases do not occur in the hands of the best obstetricians and midwives. There will be less of such cases if women are allowed to deliver their babies instead of forcible delivery by the accoucheur.

H. H. Ogilvie, in discussing the paper, emphasized that the preparation of these infants for operation is very important. There are many different ideas regarding the etiology. He asked why males should be afflicted so much more often than females? The size cannot be the complete answer, because the size of the pelvic outlet is just as important. More large female babies should develop this condition if size were a predominant etiologic factor. Also babies delivered by breech should be subject to it because a lot of traction is used in these cases. The youngest patient in his forty-seven cases was 6 days old. Why should there be such a long period before symptoms develop? And why should the condition develop in one infant at 6 days of age and not develop in another until 42 days old?

Sidney R. Kaliski stated that he had tried to reconcile his clinical observations with Dr. Flynn's theory of injury of the vagus nerve. The vagus gives off many branches distal to the site of injury, as the inferior laryngeal branch. These infants do have choking spells heretofore attributed to alkalosis tetany. One theory is that there is a maternal circulating hormone causing uterus hypertrophy in females and pyloric hypertrophy in males. Many believe the condition is congenital. There is not time enough for such a large tumor to develop. The same congenital stenosis has been observed in some stillborn seven month fetuses as that observed in full term babies. In cases of breech delivery there are many instances of hematoma of the sternomastoid muscle, so that there is a lot of traction in these cases and, according to Dr. Flynn's theory, there should be more pyloric stenosis in infants delivered by breech but there is not.

I. T. Cutter expressed the thought that perhaps lack of calcium in the mother is the cause of the condition.

Frank M. Martin stated that a better diet for the mother and better stock may prevent the condition. The one case in his experience in recent years was that of a baby delivered by cesarean section but neck traction is used in this type of case also.

Dr. Flynn, in closing the discussion, stated that he did not think that neck traction was the only cause but flexion of the neck might have something to do with its development. It is true that male babies on the whole are larger. There may be parasympathetic irritation even in the uterus. The cases that he had reviewed had been equally divided between clinic and private patients. The condition is not necessarily associated with intracranial damage.

Other Proceedings.—President Herbert Hill appointed R. E. Scott and Bowen Swinny to aid in relation to the Association of Military Surgeons of the United States, and Dr. Scott made a brief report of the work of this committee.

J. Lewis Pipkin, chairman of the arbitration committee, reported that the Highways Insurance Underwriters Association of Austin had refused to pay $2 for office calls and that the by-laws of the Society stipulate that $2 shall be the minimum fee for such office calls. It was voted that a letter should be sent to all members of the Society advising them of the rules and penalties in violation of this rule. The subject was discussed by I. T. Cutter, J. A. Watts, Lloyd I. Ross, President Herbert Hill, O. J. Potthast, L. M. Helfer, V. C. Tucker and L. B. Jackson.

October 10, 1940

Intestinal Intubation—Robert L. Rhea, Jr., San Antonio.

Bexar County Medical Society met October 10, in the Medical Library Building, San Antonio, with fifty members present. Herbert Hill, president, presided, and Albert C. King, chairman of the evening, presented the scientific program as given above.

Intestinal Intubation (Robert L. Rhea, Jr.).—The purpose of the paper is to popularize the use of the Miller-Abbott tube, to describe the tube and how it is used, what it is supposed to accomplish and will accomplish, and its limitations. It is surprising that it is not used more commonly as it has been widely accepted. It is undoubtedly a great saver of life if used in careful, patient hands and not too late. The mortality of acute ileus at the Presbyterian Hospital from 1932 to 1937 was 29.6 per cent. During the eighteen months following 1937, the mortality of acute ileus treated with the Miller-Abbott tube, was reduced to 5.9 per cent, a reduction in mortality of approximately 24 per cent.

The tube is 10 feet long and has a double lumen. Fluid and gas can be aspirated through one lumen by an attachment to the ordinary Wangensteen suction bottle. The other lumen is connected with a balloon, which can be inflated or deflated at will. The effects of distention are primarily manifested on the bowel wall. Capillary stasis, venous stasis, and arterial stasis occur with progressive increases in the intralumenal pressure. The tube relieves this pressure by aspiration of gas and fluid as it passes down the bowel. The balloon is inflated when the tip is in the small bowel, and is carried on down the intestinal tract by peristalsis, slowly at first, but more rapidly as the tone reappears.

Technique.—There are two methods used to pass the tube: (1) blind intubation, and (2) fluoroscopic guidance. It is very important to handle the tube carefully in the first phase of blind intubation—the trip from the cardia of the stomach to the pylorus. Patience cannot be emphasized too strongly. Before passing the tube, the balloon should be inflated and tested for leaks under water. The tube is best passed through the nose after the tip and balloon have been well lubricated and the nasopharynx partially anesthetized with 2 per cent cocaine solution on applicators. It is passed in the same manner as a Levine tube in this phase. The tube is inserted only to the first ring in order to be at the cardia. Then the stomach is thoroughly lavaged with warm water to remove all fluid and sticky secretions that encourage the tube to stick to the walls of the stomach and double back on itself. The suction is then connected; and an interval of ten or fifteen minutes is allowed before lavage and further insertion are performed. About two inches are next passed, the patient swallowing clear water as the tube is inserted. This procedure is

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repeated at ten or fifteen minute intervals for the next few hours until the three-line marker is reached. At this point the tube should be at the pylorus. Its position can be checked by fluoroscopy or x-ray. Also, a simple test of allowing the patient to swallow water and noting the time elapsing before appearance in the suction may be used. If there is a delay, the tube is in the duodenum. The nature of the aspirated contents is another clue. This method is known as blind intubation. (For further details, the reader is referred to the article by Dr. Octa Leigh, Jr. in the *Annals of Surgery*, February, 1940.)

The indications for use of the Miller-Abbott tube are noninflammatory and inflammatory conditions. Noninflammatory conditions in which it is indicated are: (1) paralytic ileus, caused by pneumonia, herniorrhapy, and renal colic; (2) mechanical obstruction. The tube is a dramatic lifesaver in inflammatory conditions. For instance it obviates operation in generalized peritonitis from a ruptured appendix. Administration of fluids, hot pack, morphine, and intubation should be used instead of operation, which can be delayed until the patient is in a good condition and relatively symptom-free.

The principal indications for the use of the tube are paralytic ileus and mechanical obstruction, peritonitis and postoperative distention. Its use is contraindicated in cases of gangrene of the bowel in which surgery is indicated. The tube may be used as an adjunct.

The most important consideration is that the tube be used early in cases in which it is indicated.

Dwight R. Knapp, Kerrville, in discussing the paper, stated that in ileus the tube inches along and starts up peristalsis as it passes. It is still possible for generalized peritonitis to develop fast. The tube is very helpful in cases of cancer of the bowel. Miller and Abbott advise passing the tube six inches at a time. The patient should be laid on his right side. The difficulty of passing the tube increases with increased distention.

C. C. Cade stated that the tube is a great comfort in extremely ill patients. It was a definite lifesaver in one of his cases.

Lloyd I. Ross asked if there is any difference between inflating the balloon with air or water and how much is used?

Edward W. Coyle asserted that the tube is very helpful in gallbladder cases and cases of ruptured appendix. He sometimes passes the tube before surgery.

Carl F. Goeth asked how patients are fed when the tube is used, and the danger of alkalosis.

L. J. Manhoff stressed the value of patience in the use of the tube.

Dr. Rhea, in closing the discussion, stated that he uses only air, because he considers it better. He urged that persons be kept away from the tube. From 30 to 40 cc. of air is used. The aspirated fluid is measured and 5 Gm. of salt per 1000 cc. is given. In feeding patients, fluids are given first and more food is added as the tube goes down. A soft diet is given before the tube is removed.

New Members.—The following physicians were elected to membership: A. Brooks Abshier, William Hopkins Moorehead, Jack A. French, Alfred A. Nisbet, Roland C. Kupper, John Melvin Thiel, and John J. Salter.

P. M. Keating reported on minute talks by the publicity committee. He stated that some had already been made and others are to be made over radio station KONO on "Common Diseases." Last winter eighteen addresses were made to Parent-Teachers Association groups, public forums, and so forth. He asked for names of those who wished to make talks.

The military affairs committee announced that it had blanks for members to fill out who desired part time military service.

Clay-Montague-Wise Counties Society

September 26, 1940

(Reported by W. T. Inabnett, Secretary)

Cardiac Emergencies—W. L. Powers, Wichita Falls.
Diagnosis and Treatment of Undulant Fever—Will Horn, Fort Worth.
Prostatic Obstruction—Robert J. Rinker, Fort Worth.

Clay-Montague-Wise Counties Medical Society met September 26, 1940, in Bowie, and the scientific program as given above was carried out.

Dr. Rinker in presenting his paper illustrated it with a motion picture in which an improved method for perineal prostatecomy was shown.

Dallas County Society

September 26, 1940

(Reported by W. W. Fowler, Secretary)

Dissecting Aneurysms: Case Reports—Alex W. Terrell, Dallas.
Uterosalpingography (motion picture)—E. Fougera and Company.
Use of Lipiodol in the Upper Respiratory Tract (motion picture)—E. Fougera and Company.

Dallas County Medical Society met September 26, in the Medical Arts Auditorium, Dallas, with eighty-three members present. Curtice Rosser, president, presided, and the scientific program as given above was carried out.

Alex W. Terrell reported three cases of dissecting aneurysms, which reports were discussed by S. A. Shelburne.

The two motion pictures on the program, presented through the courtesy of E. Fougera and Company, were shown by Mr. Lewis Waters.

New Member.—W. F. Schmaltz was elected to membership on application.

Resolutions of condolence were adopted on the death of Dr. J. A. Robertson of Dallas.

Douglas Bush, chairman of the program committee, discussed future programs. Following the discussion, it was voted on motion of Edward White, that a meeting would not be held on November 28, and that the program committee be authorized to meet with the program committee of the Tarrant County Medical Society to arrange for a joint meeting of the two societies in the near future.

After adjournment members retired to the Mustang Room of the Skillern Drug Store where refreshments were served by that company.

October 10, 1940

Calcium Metabolism in Diagnosis and Therapy—J. E. Robertson, Dallas.
Allergic Pneumonitis: Lofflers Syndrome—George J. Stuart, Dallas.
Painless Myocardial Infarction—Haynes Harvill, Dallas.

Dallas County Medical Society met October 10, in the Medical Arts Auditorium, Dallas, with seventy-seven members present. Curtice Rosser, president, presided, and the scientific program as give above was carried out.

The paper of J. E. Robertson was discussed by Gladys Fashena, the paper of George J. Stuart by N. B. Beaver, and the paper of Haynes Harvill by M. B. Whitten.

Other Proceedings.—John G. Young gave a report for the medical economics committee, relating to the medical care at Parkland Hospital of employees of the city of Dallas, injured while on duty. The committee held that free medical and hospital care should be given as charity to those unable to pay, and pointed out that yardsticks of indigency had been definitely set by the Society to determine those to whom such free care should be given. The committee held that this regulation of the Society did not apply to employees of the city injured while at work. It was pointed out that various commercial and industrial concerns in Texas assume the respon-

sibility of medical care of their employees while on duty, and the committee believes that a municipality, although not required legally to do so, has the same moral responsibility and therefore should furnish medical care to its employees injured in the line of duty, regardless of the ability of these employees to pay, and that such medical care should include not only the services of physicians but hospitals where necessary. The committee therefore recommended that employees of the city of Dallas injured in the line of duty should be given free choice of physician; that charges for their medical and hospital care be made on the same basis as in private cases, and that such care and payment for it is an obligation of the employer at the time of the accident.

Ben R. Buford reported for the committee having to do with the exhibit at the Dallas State Fair, which exhibit has been jointly sponsored by the Society and the Woman's Auxiliary to the Society. The exhibit, titled "Self Diagnosis and Self Medication," was assembled and furnished by the American Medical Association. It is drawing large crowds. Members of the Auxiliary in attendance on the exhibit state that they have given away more than one-half of the five thousand pamphlets, "The Priceless Heritage," and that they are giving to the public visiting the exhibit about twenty-five copies of *Hygeia* daily. The exhibit is an interesting one and answers many questions pertinent to its title. The total expense has not been completely computed, but the members of the Auxiliary in charge have estimated that it will be between $30 and $50. Space for the exhibit is free. It is located in the Federal Building. On motion of John G. Young, the Society voted to pay the expenses of the exhibit not to exceed $50.

G. A. Schenewerk, captain for the donation committee for the Community Chest for the Medical Arts Building, made a short talk urging members of the Society to support the Community Chest.

On motion of John R. Worley, the Society voted to respond 100 per cent to the Dallas Community Chest.

A communication from the chairman of the educational committee of the city traffic commission was read, expressing appreciation for the conspicuous part played by members of the Dallas County Medical Society in accounting for one hundred deathless days in traffic safety in Dallas. The commission requested that a speaker from the commission be allowed five minutes for the purpose of presenting a scroll in appreciation of the Society's contribution to this record. The Society voted to comply with the request of the Commission.

October 24, 1940

Tumor of the Eye—Guy Jones, Dallas.
Choose to Live (motion picture)—J. M. Martin, Dallas.
Shock, Its Recognition and Treatment—Frank Selecman, Dallas.

Dallas County Medical Society met October 24, in the Medical Arts Auditorium, Dallas, with seventy-two members present. Curtice Rosser, president, presided, and the scientific program as given above was carried out.

Guy Jones delivered an address on retinal blastoma, which subject was discussed by F. H. Newton and Charles L. Martin.

J. M. Martin exhibited a sound motion picture film on the subject of cancer and its treatment.

The address of Frank Selecman was discussed by Ozro T. Woods, J. H. Dorman, A. W. Harris and John R. Worley.

Other Proceedings.—M. S. Seely called attention to a questionnaire being sent to physicians of Texas by the David Graham Hall Foundation, the purpose of which is to get the opinion of physicians on methods of syphilis control. He moved that the questionnaire be referred to the economic relations committee for consideration with the request that this committee report its recommendations to the Society on this matter at the next regular meeting.

After adjournment members of the Society retired to the Mustang Room of the Skillern Drug Company, where refreshments were served, compliments of J. H. Allen of Justin, Texas. After refreshments a rising vote of thanks was extended Dr. Allen for his hospitality.

Grimes County Society

November 7, 1940

(Reported by Judson L. Taylor, Councilor, Ninth District)

Grimes County Medical Society sponsored a postgraduate refresher course presented November 7, in Navasota, under the auspices of the State Health Department in coöperation with the State Medical Association. Approximately twenty physicians attended.

Guest speakers were J. L. Jenkins, Galveston, who discussed obstetric subjects, and Porter Brown, Fort Worth, who talked on syphilis. The meeting was exceptionally interesting and the subjects were well presented. There was an afternoon session following which Grimes County Society entertained visiting physicians at a barbecue at a nearby ranch, after which the meeting was continued.

Hidalgo-Starr Counties Society

November 14, 1940

(Reported by C. J. Hamme, Secretary)

Hidalgo-Starr Counties Medical Society held a joint dinner meeting with the Auxiliary, November 14, 1940, at Hotel Edinburg, Edinburg.

Following the showing of a talking picture on pregnant mare serum hormone, S. Foster Moore of San Antonio, discussed the clinical application of this hormone and answered questions on its uses.

The committee on military affairs reported that with a few exceptions, all members of the Society had volunteered their services in some phase of the National defense program. C. J. Hamme has been appointed examiner for the local Selective Service Board, No. 1, at Edinburg; Thomas Burnett had been recommended for Board No. 2, at Mission, and T. W. Glass for Board No. 3, at Weslaco.

D. C. Hyder reported that broadcasts on Monday at one o'clock over radio station KRGV were receiving praise from the public throughout the Valley, and that arrangements had been made to have the radio talks translated and broadcast weekly on the Latin American hour.

Hunt-Rockwall-Rains Counties Society

October 8, 1940

(Reported by M. L. Wilbanks, Secretary)

Early Syphilis and Central Nervous System Syphilis—O. H. Trimble, Greenville.
Secondary Syphilis and Late Syphilis—E. R. Hayes, Greenville.
Treatment of Gonorrhea—E. T. Crim, Greenville.

Hunt-Rockwall-Rains Counties Medical Society met October 8, at Greenville, with seventeen members and two visitors present. T. C. Strickland, president, presided, and the scientific program as given above was carried out.

Early Syphilis and Central Nervous System Syphilis (O. H. Trimble).—Chancre with its usual locations must be differentiated from epitheliomata, chancroid, avitaminosis, lymphogranuloma inguinale, and herpes of the lip. The laboratory diagnosis of syphilis includes the agglutination test of Hinton, Kline and Kahn, or the complement fixation test, such as the Wassermann. Yaws, leprosy, malaria, and infectious mononucleosis all may give positive Wassermann or agglutination tests for syphilis, and, therefore, should always be given consideration when a positive serologic test occurs in the absence of

clinical indications or history of syphilis. In early central nervous system syphilis and in the secondary phase there are spinal fluid changes in from 25 to 40 per cent of cases. Central nervous system evidences of syphilis in its latent form are largely the result of undertreatment.

E. R. Hayes in his paper on secondary and late syphilis, pointed out that secondary syphilis is the stage of general invasion of the body. Central nervous system syphilis develops in patients in whom there are spinal fluid changes in the first eighteen months of the disease. Early, proper treatment is the only satisfactory method of prevention. Therefore syphilitic aortitis will be obviated by adequate early treatment of the disease.

The papers of O. H. Trimble and E. R. Hayes were discussed by S. D. Whitten, T. C. Strickland, Henry C. Wilson, and C. T. Kennedy.

E. T. Crim read a paper on treatment of gonorrhea, discussing both chemotherapy and local treatment. The management of different stages of gonorrhea in the female was outlined. The paper was discussed by H. W. Maier, S. D. Whitten and John S. Cooper.

Other Proceedings.—W. B. Reeves reporting for the committee on postgraduate refresher courses stated that the subjects recommended by the committee were obstetrics and pediatrics, and the date selected for the course was the second Tuesday in February.

November 1, 1940

Hunt-Rockwall-Rains Counties Medical Society held a call meeting November 1, with ten members and one visitor present. T. C. Strickland, president, presided.

The purpose of the meeting was to discuss a bond issue for a hospital for Hunt County.

On motion of E. P. Goode, the Society voted to endorse the bond issue and that the views of the Society be stated by the public relations committee and the president. The subject was discussed by W. C. Morrow, W. P. Philips, M. L. Wilbanks, E. P. Goode, S. D. Whitten, James W. Ward, C. T. Kennedy, E. R. Hayes, O. H. Trimble, and C. T. Atkinson.

The public relations committee with the president, prepared a statement that Hunt-Rockwall-Rains Counties Medical Society at a meeting November 1, unanimously endorsed the project of a general hospital for Hunt County, since such an institution would be of untold benefit to every citizen in the County, with no special privileges for any one group.

Resolutions of sympathy were adopted on the death of Dr. J. W. Benton of Peniel, who died September 29, 1940, Dr. P. W. Pearson of Emory, who died October 12, and Dr. S. W. Wadley of Royse City, who died November 4.

Hunt-Rockwall-Rains Counties Medical Society will be host December 4, to the North Texas District Medical Society, which will meet on that date in the Municipal Building, Greenville.

Jefferson County Society

October 14, 1940

(Reported by W. Price Killingsworth, Secretary)

Right Esophago-bronchial Fistula: Case Report—H. B. Eisenstadt, Port Arthur.
Treatment of Fractures of the Lower Extremities—H. Theodore Simon, New Orleans, Louisiana.
Physicians Practicing Dentistry—J. W. Outlaw (D. D. S.), Beaumont.

Jefferson County Medical Society met October 14, 1940, at St. Mary's Hospital, Port Arthur, with forty members present. James W. Long, president, presided and the scientific program as given above was carried out.

Right Esophago-bronchial Fistula (H. B. Eisenstadt).—A rare case of right esophago-bronchial fistula in a man, age 29, was presented. Roentgen and clinical findings were reviewed. The patient had been operated on by Dr. Oschner of New Orleans with partial recovery. The patient was presented to the Society for observation.

Treatment of Fractures of the Lower Extremities (H. Theodore Simon).—The importance of conservative treatment in dealing with fractures of the lower extremities was stressed. Accurate knowledge of anatomic factors and the part of muscle pull in treatment of these fractures are essential to successful treatment. Emphasis was placed on the fact that all fractures should be treated as emergencies with the exception of patella injuries, in which it is wise to wait four to seven days, thereby avoiding many secondary infections. A motion picture was shown illustrating the anatomical factors and mechanical features involved in the treatment of fractures, showing actual reduction and application of casts to the various types of fractures seen in the lower extremities.

The paper was discussed by D. A. Mann, John M. Smith, William A. Smith, B. F. Chambers, Anspach, Harris Hosen and James W. Long, who also directed questions to the essayist.

Dr. Simon, in closing the discussion, stated that he had no first-hand information concerning the use of sulfanilamide or its compounds in compound fractures and felt that its use was not without danger. He further stated that early gas bacillus infections could be detected with x-ray examination before clinical signs were present. Brief mention was made of the treatment of these infections with antitoxin, deep x-ray and ultraviolet therapy, and so forth. He advised against the use of too much weight and pull where continued traction is necessary. The essayist agreed with Dr. Anspach that too much x-ray exposure retards normal bone healing. He also advised against the routine use of plaster of Paris to the skin.

Physicians Practicing Dentistry (J. W. Outlaw, D. D. S.).—A discussion of the relationship between medicine and dentistry was presented, pointing out many of the errors committed by both physicians and dentists, and reviewing the overlapping of the two fields.

The presentation was discussed by P. R. Meyer, Harris Hosen, William A. Smith, S. E. White and Dr. Clark. Many controversial subjects between medicine and dentistry were mentioned in the discussion of Dr. Outlaw's paper, such as thumb sucking, dental caries, nasal obstruction, and their relationship to diet, general health of the mother and offspring, together with metabolic, allergic, and endocrine disturbances.

Dr. Outlaw, in closing, made a plea for closer relationship and coöperation between physicians and dentists.

President Long appointed the following committee on military affairs: For the Army, Furman Tyner, chairman, Port Arthur; A. R. Autrey, J. W. Long, W. M. Covode, Paul Meyer, and W. E. McRee, Port Arthur; Lamar Bevil, C. B. Shaddock, and T. R. Jones, Beaumont; B. F. Pace, Nederland; and John Smith, Port Neches; for the Navy, Dudley English, T. A. Fears, and Eugene Lindsey, Beaumont, and B. J. Fett, Port Arthur.

President Long also appointed the following committee to arrange the program of the next meeting to be held in Beaumont, which meeting is to be a joint affair with the Jefferson County Auxiliary. It was voted that the program would include a dinner, a scientific program and a dance. The committee appointed is as follows: William A. Smith, chairman, Tony Fears, and Sam Lyons, Beaumont; Mrs. I. T. Young, co-chairman, and W. Price Killingsworth, Port Arthur; and B. F. Pace, Nederland.

Palo Pinto-Parker Counties Society

September 2, 1940

(Reported by J. Edward Johnson, Secretary pro tem)

Differential Diagnosis of Jaundice—Leo N. Roan, Weatherford.
Sputum Examination for Tubercle Bacilli: A New Method—J. Edward Johnson, Mineral Wells.

Palo Pinto-Parker Counties Medical Society met September 2, with twelve members and two visitors present. C. B. Williams, president, presided and the scientific program as given above was carried out.

Leo N. Roan gave a complete discussion of the differential diagnosis of jaundice including conditions in which it appears and the laboratory aids useful in its differential diagnosis. The paper was an excellent one and has been filed for permanent record. On motion of Ben McCloud, the Society voted to have J. Edward Johnson prepare lantern slides reviewing the diagnositic features given in the paper.

J. Edward Johnson described a method of concentrating tubercle bacilli in the sputum for diagnosis of stained slide specimens. The method consists of the digestion of the mucoid material in sputum with a simple, digestive, vegetable ferment, so that the tubercle bacilli may be concentrated by centrifugation. Stained slides from the same sputum were exhibited, showing the comparative number of tubercle bacilli found in the ordinary direct smear and by the concentration technique referred to. The slides prepared after the concentration technique showed, on an average, sixty times as many tubercle bacilli. Certain precautions that will increase efficiency in staining, if carefully observed, were mentioned. The research work described had been done in the Mineral Wells chest clinic service. The advantage of the procedure is that it is simple and inexpensive. It is designed to increase the usefulness of sputum examination in the diagnosis of tuberculosis, thus reducing the cost in tuberculosis case finding.

October 7, 1940

Indications for Tonsillectomy—Round table discussion by various members.
The Relation between Nephritis and Tonsil Infection—Leo N. Roan, Weatherford.
The Relationship of Tonsillitis and Acute Rheumatic Fever—J. E. Smith, Weatherford.
Tonsillectomy in the Child with Tuberculosis Background—C. R. Williams, Mineral Wells.
The Indications for Tonsillectomy in Children Threatened with Nephritis—J. Edward Johnson, Mineral Wells.

Palo Pinto-Parker Counties Medical Society met October 7, with eleven members present. C. B. Williams, president, presided and the scientific program as given above was carried out.

J. E. Smith, in discussing the relationship of tonsillitis and acute rheumatic fever, stated that it has recently been shown that tonsillectomy properly timed and used in selected cases will reduce the incidence of rheumatic fever.

D. R. Williams in discussing the operation of tonsillectomy in a child with tuberculosis background stated that tuberculosis of the tonsil is a very rare condition.

J. Edward Johnson, in discussing the indications for tonsillectomy in children threatened with nephritis, stated that in general tonsillectomy occasionally precipitates fresh attacks of nephritis and that there is no good evidence available to show that the operation improves the child's health or prognosis. He further pointed out that, in statistical studies of rheumatic cases, those treated by tonsillectomy probably include more potential rheumatic cases than the general population will show, while children whose tonsils are not removed might include less potential rheumatic cases than the average child population, for which reason it is necessary to guard against fallacy in interpreting such statistics.

C. B. Williams asserted that the otolaryngologists have been leaders of the medical profession generally with regard to conservatism in connection with tonsillectomies. Dr. Williams enumerated the principal indications for tonsillectomy as revealed by the tonsils and pharynx and urged that still greater care be employed in the study of cases before children are referred for tonsillectomy.

November 4, 1940

Treatment of Snake Bite—Rollin L. Fillmore, Jacksboro.
Infestation of Nasal and Sinus Cavities by Maggots with Report of Four Cases—C. R. Williams, Mineral Wells.

Palo Pinto-Parker Counties Medical Society met November 4, with thirteen members present. The scientific program as given above was carried out.

Treatment of Snake Bite (Rollin L. Fillmore).—The physiology of the circulation of lymph and tissue fluids that transport snake venom from a snake bite up the extremity into the general circulation and the scientific principle involved in the proper treatment of snake bite were reviewed. The equipment necessary for the incision that should be used in cases of snake bite and the employment of suction were demonstrated. The importance of complete encirclement of the affected extremity with staggered crucial incisions at some point in the upper third of the lower extremity or higher if the snake bite is above the knee, for the purpose of draining as much venom-bearing fluid from the extremity as possible, was emphasized. Thorough incision and suction treatment of the bite; hot, moist packs to the affected extremity, and general supportive measures for the forty-eight hour period immediately following the bite were advocated. A patient who had been treated for a bad rattlesnake bite was presented, whose extremity showed the scars used in the encirclement incision.

Maggot Infestation of Nasal and Sinus Cavities (C. B. Williams).—The difficulties encountered in destroying and removing maggots from the deep recesses of the head were described, and the danger to life in cases of maggot infestation of the nasal accessory sinuses was pointed out, since these organisms attack the cribriform plate of the ethmoid and may penetrate to the meninges with resultant meningitis. In four cases reported by the essayist, a total of 421 maggots were removed in addition to a tablespoonful in a case not included in the series. The maggots had been sent to the biological department of the University of Texas for classification.

Other Proceedings.—A military affairs committee composed of E. F. Yeager and C. B. Williams of Mineral Wells was appointed in response to a request by the State Medical Association of Texas.

Following a discussion of the preventive precautions against communicable diseases that may occur with greater frequency in the community as the new army camp becomes filled with men, the Society voted as favoring the inauguration of a campaign for vaccination against smallpox and immunization against diphtheria and typhoid fever.

Other health problems, such as an anticipated increase in venereal disease after concentration of troops near Mineral Wells, were considered, but decision regarding advantageous health steps to be taken was postponed until further conferences between representatives of the Society and the State Health Department.

Tarrant County Society

November 5, 1940

(Reported by Craig Munter, Secretary)

Interesting Skin Lesions (colored lantern slides)—J. Franklin Campbell, Fort Worth.
The Chronic Sputum-producing Person in Texas—John Potts, Fort Worth.

Tarrant County Medical Society met November 5, 1940, in the Medical Arts Auditorium, Fort Worth, with sixty members and three visitors present. The scientific program as given above was carried out.

The presentation of Dr. Campbell was discussed

by Porter Brown, S. J. Wilson and L. O. Godley.

The address of Dr. Potts was discussed by H. O. Deaton, May Owen, Frank W. Halpin, and Walten H. McKenzie.

New Members.—John McCarty Cassidy, Hicks Field, was elected to membership on application, and John Robert Rinker was elected to membership on transfer from the Chicago County, Illinois, Medical Society.

Resolutions of respect and condolence were adopted on the death of Mr. J. T. Hyde, father of Dr. X. R. Hyde of Fort Worth.

Secretary Munter announced a party for members of the Society, November 14, at Colonial Hills, compliments of the Renfro Drug Company.

Wilmer Allison, chairman of the military affairs committee, read communications from the secretary of the State Medical Association and J. W. E. H. Beck, of the State Headquarters for Selective Service, regarding the examination of draftees. Dr. Allison asked the coöperation of members of the Society as called on in medical features of the national defense program. He also urged members who had not already done so, to send in their medical preparedness questionnaires to the American Medical Association offices, Chicago.

Mr. J. J. Russell of the Fort Worth Lions Club, spoke regarding a baby clinic to be sponsored by that organization and asked the coöperation and endorsement of the Society. On motion of Wilmer Allison, seconded by T. C. Terrell, the Society voted to endorse the baby clinic sponsored by the Lions Club.

The attendance prize, a radio, was won by Nelson L. Dunn.

Following adjournment, a sound film was presented through the courtesy of Mead Johnson and Company.

Wichita County Society

November 12, 1940

(Reported by C. E. Mangum, Secretary)

Diagnosis and Treatment of Shock—Frank Selecman, Dallas.
When Bobby Goes to School (motion picture)—Mead Johnson and Company.

Wichita County Medical Society met November 12, 1940, at the Wichita Club, Wichita Falls, with forty members present. The scientific program as given above was carried out.

T. L. Hyde, reporting for the executive committee, outlined an insurance plan for group medical service.

Frank Selecman, Dallas, stated that the plan was being tried in an experimental way by the Dallas County Medical Society and that it had proven satisfactory to date.

No action was taken on the matter by the Society.

New Members.—G. T. Woodard, H. C. Sullivan and K. W. McFatridge were elected to membership.

A sound motion picture film, "When Bobby Goes to School," was shown through the courtesy of the Mead Johnson Company.

Fourth District Society

October 17, 1940

(Reported by O. H. Chandler, Ballinger, Secretary)

The Fourth District Medical Society held its forty-fifth annual meeting at the City Hall, Ballinger, October 17, with fifty-two members present. J. P. Anderson, president, presided, and the following scientific program was carried out:

Early Diagnosis of Tuberculosis—H. M. Anderson, San Angelo.
(Discussed by J. B. McKnight, Sanatorium.)
Immunization—R. M. Finks, San Angelo.
(Discussed by R. H. Cochran, Coleman.)
Head Injuries—Jack Furman, Fort Worth.
(Discussed by J. S. Anderson, Brady.)
Arthritis, a Symptom Complex—F. T. McIntire, San Angelo.
(Discussed by Shirley Sweeney, Dallas.)
Selective Surgical Procedures in Lesions of the Stomach and Duodenum, with Motion Picture Demonstration—George R. Enloe, Fort Worth.
(Discussed by Charles F. Bailey, Ballinger.)
Cancer of the Breast with Special Reference to Its Preoperative Roentgen Therapy—E. V. Powell, Fort Worth.
(Discussed by Jack Furman, Fort Worth.)
The Use of Endocrines in Gynecology—Karl J. Karnaky, Houston.
(Discussed by J. Shirley Sweeney, Dallas.)
Low Back Pain—Paul C. Williams, Dallas.
(Discussed by O. N. Mayo, Brownwood.)
Functional Diseases—J. Shirley Sweeney, Dallas.
(Discussed by F. T. McIntire, San Angelo.)
The Modern Management of Common Skin Diseases—Arthur G. Schock, Dallas.
(Discussed by Seth W. Kellam, Menard.)
Treatment of Common Eye Injuries by the General Profession—Charles Potts, San Angelo.
(Discussed by Sidney Hughes, Brownwood.)

Each of the papers was followed with interesting discussion.

In the evening, a banquet was held at the Central Hotel for members and their wives. J. B. McKnight, Sanatorium, was toastmaster. On this occasion Mrs. William Hibbitts, Texarkana, president of the Woman's Auxiliary to the State Medical Association, was introduced by Mrs. Charles F. Bailey, vice-president of the Fourth District Auxiliary, and delivered an address.

Addresses were also delivered by N. B. Buie, Marlin, President-elect of the State Medical Association, on the subject, "Platform of the American Medical Association," and Preston Hunt, Texarkana, whose subject was, "Present Status and Progress of the Medical Profession." Dr. Hunt was introduced by O. N. Mayo, councilor of the Fourth District.

During a business meeting the following officers were elected for the ensuing year: President, O. H. Chandler, Ballinger; vice-president, R. H. Cochran, Coleman; and secretary, F. T. McIntire, San Angelo.

The Society will hold its next meeting in San Angelo in October, 1941.

CHANGES OF ADDRESS

Dr. F. W. Allen, from Palacios to Houston.

Dr. A. M. Allison, from Alice to San Antonio.

Dr. John W. A. Althaus, from Fort Worth to Camp Bowie, Brownwood.

Dr. W. E. Carruth, from Littlefield to Brownsville.

Dr. T. H. DeLaureal, from Temple to Lake Charles, Louisiana.

Dr. Victor V. Friend, from Crowell to Houston.

Dr. L. M. Garrett, from Corpus Christi to Camp Bowie, Brownwood.

Dr. D. F. Gray, from Grand Junction, Colorado, to Mesa, Colorado.

Dr. J. B. Griffin, from Dallas to Augusta, Georgia.

Dr. Glenn T. Howard, from Bruni to San Antonio.

Dr. Wm. A. Hyde, from Galveston to Durant, Oklahoma.

Dr. Carrol A. Johnson, from Marfa to San Antonio.

Dr. W. L. Kitchens from Marshall to Fort Worth.

Dr. Dean Bigham Jones, from Dublin to Kingsville.

Dr. Hershall LaForge, from George West to Uvalde.

Dr. Arthus N. Lewis, from Mobile, Alabama, to Fort Benning, Georgia.

Dr. Walter E. McRee, from Port Arthur to Randolph Field.

Dr. Paul R. Meyer, from Port Arthur to Camp Bowie, Brownwood.

Dr. Hal H. Puckett, from Texarkana to Alice.

Dr. Vincent M. Ravel, from El Paso to Dallas.

Dr. Simon Rodriguez, from Eagle Pass to Del Rio.

Dr. Abner A. Ross, from Lockhart to Brownwood.

Dr. Julian T. Saldivar, from Austin to Fort Clark.

Dr. J. S. Scarborough, from Rusk to Camp Bowie, Brownwood.

Dr. Edward V. Swift, from Austin to Palestine.

Dr. Homer H. Whitney, from Dallas to Nada.

AUXILIARY NOTES

Officers of the Woman's Auxiliary to the State Medical Association of Texas; President, Mrs. William Hibbitts, Texarkana; honorary life president, Mrs. A. C. Scott, Sr., Temple; president-elect, Mrs. S. F. Harrington, Dallas; first vice-president, Mrs. H. Leslie Moore, Dallas; second vice-president, Mrs. A. E. Moon, Temple; third vice-president, Mrs. A. B. Pumphrey, Fort Worth; fourth vice-president, Mrs. Joe B. Foster, Houston; recording secretary, Mrs. Walter A. Minsch, Kerrville; publicity secretary, Mrs. W. F. Armstrong, Fort Worth; treasurer, Mrs. J. Frank Clark, Abilene; parliamentarian, Mrs. J. W. Tottenham, Brownwood; and corresponding secretary, Mrs. Ralph Cross, Texarkana.

AUXILIARY NEWS

Bowie-Miller Counties Auxiliary honored Mrs. William Hibbitts, Texarkana, president of the Texas State Auxiliary, and Mrs. Alfred Hathcock, Fayetteville, president of the Arkansas State Auxiliary, at a luncheon October 25, at the Hotel Grim, Texarkana.

Mrs. L. H. Lanier gave the invocation.

Mrs. Joe Tyson, president of the Bowie-Miller Counties Auxiliary, introduced the honorees and several visitors.

Mrs. Hibbitts, in an address, stressed the ill effects of over organization and the good that can be accomplished by active membership in a few well chosen clubs or groups. Mrs. Hibbitts outlined the splendid program of the State Auxiliary, with special reference to the scholarship fund now available for worthy, needy students; the memorial fund for needy widows of deceased physicians; the numerous philanthropic activities of the Auxiliary; its self educational advantages, and last but not least in importance, its social value.

Mrs. Hathcock related experiences of her travels about Arkansas as president of that State Auxiliary and referred to programs that are being effectively carried on in county auxiliaries. Mrs. Hathcock also outlined the primary purposes of the auxiliary, recounting its organization activities, its educational objectives, its value to the public, the need for careful study of legislation pertaining to medicine, the growth of the student loan fund, library expansion, and the need for auxiliary members keeping informed about present-day medicine and the problems of the medical profession.

A report was given of arrangements for the meeting of the Auxiliary February 11, at which time Dr. W. W. Bauer, Director of the Bureau of Health Education of the American Medical Association, will address an open meeting of the Auxiliary and also audiences in Texarkana schools.

Preceding the addresses of Mrs. Hibbitts and Mrs. Hathcock, Mrs. Will Quinn gave vocal solos accompanied by Mrs. Erman Adams, and the entire group sang "God Bless America."

Ellis County Auxiliary honored Mrs. William Hibbitts, Texarkana, president of the State Auxiliary, with a luncheon, October 29, at the home of Mrs. Fred L. Story, Ennis. Mrs. A. L. Thomas presided.

Addresses were made by Mrs. Hibbitts; Mrs. S. H. Watson, Waxahachie, past president of the State Auxiliary, and Mrs. William Thomas, Terrell, council woman of the Fourteenth District.

Mrs. G. F. Powell, Terrell, was a special guest with Mrs. Hibbitts and Mrs. William Thomas.

Harris County Auxiliary met October 28, at the Junior League, Houston.

After a business meeting, styles of yesteryear dating from 1895 to 1906 were modeled by members of the Auxiliary and their daughters.

Hostesses for the occasion were Mesdames C. W. Hoeflich, C. Forrest Jorns, F. H. Kilgore, C. W. Klanke, L. L. D. Tuttle, B. F. Coop, John F. Rader, Lyle J. Logue, Paul R. Stalnaker, and Herman W. Johnson.—Mrs. C. A. Calhoun.

Henderson County Auxiliary held a luncheon meeting October 22, at the Woman's Club House, Athens.

Mrs. William Hibbitts, Texarkana, president of the State Auxiliary, was the guest speaker. Mrs. Hibbitts spoke on the subject of organization. She pointed out that an active, interesting organization is one in which each member has some duty to perform. While the State Auxiliary was originally organized for social purposes in order that families of physicians might become better acquainted, with present-day political trends endangering the private practice of medicine with socialistic changes it has become necessary for the Auxiliary to add to its program a careful study of such conditions in order that it may be a real aid to the medical profession in combating these trends. With twenty-five thousand members of the Auxiliary in the United States, worth while work may be accomplished in molding public opinion to a sane view of health legislation which will affect vitally not only the medical profession but the medical care of the public.

Mrs. Hibbitts also called attention to the memorial fund for needy widows of physicians, the scholarship fund for assisting worthy, needy medical students to complete their medical education, as projects of the State Auxiliary.

Preceding the luncheon a musical program was given, with Mrs. W. B. Smith, Jr., in charge. Mrs. Smith also welcomed the out of town guests, and paid tribute to an active member of the Auxiliary who has passed her eightieth birthday. Mrs. W. T. Black was presented with a bouquet of red roses.

Mrs. B. C. Wallace read a collect.

Miss Frances Turman, Mrs. Alice Blair Gauntt, and Miss Emily Shivers of Crockett gave a musical program, Miss Shivers being accompanied by Mrs. Paul Stokes.

Hunt-Rockwall-Rains Counties Auxiliary met recently at the home of Mrs. Joe Becton, Greenville, with twenty-four members present. Mrs. T. C. Strickland, president, presided.

The Auxiliary voted to coöperate with the City Federation in the operation of the Red Cross sewing room and to sponsor again this year, an essay contest for students in the senior high school, the topic for this year's essay being, "Increasing the Span of Life."

The meeting was in observance of Bible Day and each member answered roll call with Biblical references to health.

Mrs. E. R. Hayes sang "Prayer" by David Guion, after which members repeated the Lord's Prayer.

Mrs. Henry Pharr spoke on the subject of Biblical Thanksgiving, discussing the significance of Thanksgiving day from its first official celebration in 1864 to the present. Mrs. O. S. Hervey, president of the Greenville City Federation, was a guest at the meeting.

Jasper-Newton Counties Auxiliary met October 16, in the home of Dr. and Mrs. G. Graham, Newton. Miss Edna Shaffer, Jasper County public health nurse, gave a report on the rural health program.

Mrs. Earl Armstrong gave a medley of piano selections of her own composition.

Jefferson County Auxiliary held its November meeting at the Goodhue Hotel, Port Arthur, with Mrs. I. T. Young, Port Arthur, presiding.

Dr. James Long, guest speaker, spoke on cancer, illustrating his talk with lantern slides which were exhibited by Dr. F. H. Tyner.

Hostesses for the meeting included Mesdames Joe Stoeltje and D. F. Pace, Nederland, and Mesdames J. G. Welch and J. M. Smith, Port Neches.

Tarrant County Auxiliary held its annual public

relations program November 8, in the form of a tea at the Woman's Club, Fort Worth.

Dr. Sidney Stout, Fort Worth, addressed a representative group of members of the Auxiliary and invited guests from various women's organizations of the city on the subject of heart disease and allied conditions.

Preceding Dr. Stout's talk, Mrs. J. E. McKinney sang two solos, accompanied at the piano by Mrs. Faguy-Cote.

Following the program tea was served.

Taylor-Jones Counties Auxiliary honored Mrs. William Hibbitts, Texarkana, president of the State Auxiliary, with a coffee, October 16. Mrs. Hibbitts was en route to Ballinger to address the Fourth District Auxiliary. In the evening of October 15, Mrs. Hibbitts was honoree at a no-hostess outdoor supper at the suburban home of Dr. and Mrs. J. Frank Clark, Abilene, with members of the Auxiliary and their husbands as guests.

Tom Green Eight County Auxiliary held a luncheon meeting November 4, at the Hotel Cactus, San Angelo, in observance of Doctors' Day, with nineteen members and one guest present.

Mrs. Harlan Horney, vice-president, presided. The Auxiliary voted to establish and maintain a luncheon for a Mexican school as a project for the year, the need for hot lunches in this school having been previously investigated by Mesdames R. M. Finks, J. A. Bunyard, and J. S. Hixson.

In celebration of Doctors' Day, a free will offering was taken for the memorial fund of the State Auxiliary.

Mrs. B. T. Brown read an article, "The Physician.

Piano selections were given by Mrs. Scottie R. Johnson.

Hostesses for the meeting were Mesdames J. Valton Sessums, Lewis K. Tester, Lewis O. Woodward, F. T. McIntire, Charles R. Potts, B. T. Brown, and J. S. Hixson.

Tom Green Eight County Auxiliary sponsored a silver tea to which the public was invited November 13, in the home of Mrs. Jerome H. Smith, San Angelo. The proceeds will be used for the Mexican school luncheon project of the Auxiliary.

This affair was arranged by Mrs. B. T. Brown, general chairman, and all Auxiliary members were in the house party.—Mrs. Lewis K. Tester.

The Fourth District Auxiliary held its thirty-fifth annual meeting October 17, in Ballinger, with twenty members present. A luncheon was given at the Central Hotel, honoring Mrs. William Hibbitts, Texarkana, president of the State Auxiliary.

Mrs. Homer B. Allen, Brownwood, president, presided at the business meeting.

Mrs. A. L. Fuller, Ballinger, president of the Runnels County Auxiliary, gave the address of welcome which was responded to by President Mrs. Allen.

Mrs. J. W. Dixon, Winters, gave the invocation.

Mrs. Hibbitts, introduced by Mrs. Allen, spoke on methods of procedure that are vital to the success of an organization. Mrs. Hibbitts outlined a program of work for medical auxiliaries to follow and urged that medical auxiliaries work as separate units in Red Cross activities.

President Mrs. Allen urged that county auxiliaries sponsor the essay contest for tenth grade high school students on "Increasing the Span of Life."

Mrs. C. F. Bailey, Ballinger, council woman for the Fourth District, spoke briefly and gave a report of the recent meeting of the Executive Board of the State Auxiliary.

The following officers, proposed by the nominating committee, were elected to serve during the ensuing year: President, Mrs. O. H. Chandler, Ballinger; first vice-president, Mrs. J. H. McCall, Brady; second vice-president, Mrs. Seth Kellum, Menard; recording and corresponding secretary, Mrs. C. F. Bailey, Ballinger; parliamentarian, Mrs. George McFarland, Brownwood; treasurer, Mrs. R. R. Lovelady, Santa Anna; and publicity secretary, Mrs. J. M. Rape, San Angelo.

After the meeting, members and guests were entertained by the Runnels County Auxiliary with a book review and tea in the home of Dr. and Mrs. C. F. Bailey, Ballinger.

In the evening members of the Auxiliary joined members of the District Medical Society for a banquet at the Central Hotel. Dr. J. B. McKnight presided as toastmaster. Addresses were made by Dr. Preston Hunt, Texarkana, and Dr. N. D. Buie, Marlin, president and president-elect, respectively, of the State Medical Association, who were the principal speakers. A short talk was also made by Mrs. William Hibbitts, president of the State Auxiliary.

Mrs. Abell D. Hardin, wife of Dr. Abell D. Hardin, died September 30, in a Dallas hospital. Mrs. Hardin is survived by her husband; a son, Dr. Hal White Hardin, an intern in the Graduate Hospital of the University of Pennsylvania; a sister, and two brothers.

Mrs. J. M. Potts, wife of Dr. J. M. Potts, Dallas, died September 29, at her home. Mrs. Potts is survived by her husband; two sons and five daughters.

BOOK NOTES

[1]**Clinical Heart Disease.** By Samuel A. Levine, M. D., F. A. C. P., Assistant Professor of Medicine, Harvard Medical School; Senior Associate in Medicine, Peter Brent Brigham Hospital, Boston; Consultant Cardiologist, Newton Hospital; Physician, New England Baptist Hospital, Boston. Second Edition, Revised and Reset. Cloth, 495 pages, with 109 illustrations. Price, $6.00. W. B. Saunders Company, Philadelphia and London, 1940.

The second edition of this very worth while book retains the same general form as did the first edition of four years ago. The internist as well as the general practitioner will appreciate this recent treatise on cardiac disease, much of which is written in a delightful, personative manner.

The following statements are illustrative of the many recorded observations to be found in this book. It is generally held that angina pectoris can be precipitated by anemia and improved with the successful treatment of the anemia. However, little emphasis has been given to the fact that after the return of a normal blood count, as in pernicious anemia, the blood pressure may rise with cerebral hemorrhage or coronary thrombosis—the teaching being to be content with a sub-optimal count. The distressing symptoms of myxedema prevent the employment of total thyroid ablation for angina pectoris and congestive heart failure in all except the occasional patient. Masked hyperthyroidism with cardiac disease is written of in much detail. Slowing of the heart rate in auricular fibrillation has resulted following iodine therapy or surgery even with no palpable thyroid enlargement, when digitalis in adequate dosage has failed.

A new chapter, Medicolegal Aspects of Heart Disease, points out how care must be exercised in classifying a heart complaint following trauma as functional, when not infrequently it is organic. The author's discussion of the mechanism of congestive failure with remarks on the actions of digitalis is excellent. The status of lead IV is now included with the section on electrocardiography.

The inclusion of many minor but pertinent obser-

[1]Reviewed by M. Hill Metz, M. D., Dallas, Texas.

vations along with the well known ones signifies that this monograph is the contribution of a true medical specialist. A book never holds the appeal offered by excellent bedside instruction but this one approaches near to that ideal.

[2]Leprosy. By Sir Leonard Rogers, K. C. S. I., C. I. E., M. D., F. R. C. P., F. R. C. S., F. R. S., I. M. S. (Retired) Late Physician and Lecturer, London School of Tropical Medicine, and Professor of Pathology, Calcutta Medical College and Ernest Muir, C. I. E., M. D., F. R. C. S., Edinburgh, Medical Secretary, British Empire Leprosy Relief Association; Late Research Worker in Leprosy at the School of Tropical Medicine and Hygiene, Calcutta. Second Edition. Cloth, 252 pages. Price, $4.50. A William Wood Book. The Williams & Wilkins Company, Baltimore, 1940.

The casual mention of the word leprosy has always carried with it such an aura of hopelessness that it is extremely difficult to find anywhere a word of courage and proof of advanced knowledge in the detection, treatment and prophylaxis of this condition.

Yet, here in this book we have a word of courage and proof of advancement. The author details minutely the leprous situation over the entire world and the handling of this problem. Now that effective methods are available for clearing up the symptoms and infectivity of most early and a few of the more advanced cases, the whole problem has entered upon a newer and more hopeful threshold.

Even though the precise mode of communication is still unproved, necessitating a close study of all the relevant facts recorded in a vast literature, the hereditary theory has been discarded in favor of the more generally accepted and hopeful one of infectivity. This fact has aided in prophylaxis. The uninfectious or slightly infectious cases can be treated in the out-clinic in the more early amenable stages, in place of being hidden until too late to benefit materially from modern treatment. The old prison-like asylums are giving place to agricultural colonies to the benefit of both the health of the inmates and the finances of the institutions.

Never has the reviewer witnessed a work more complete, interesting, revealing, or educational, and it is to be hoped that this work will be widely read.

[3]Manson's Tropical Diseases, A Manual of the Diseases of Warm Climates. Edited by Philip H. Manson-Bahr, C. M. G., D. S. O., M. A., M. D., D. T. M. and H. Cantab., F. R. C. P. Lond. Senior Physician to the Hospital for Tropical Diseases, London, the Albert Dock Hospital and the Tilbury Hospital. Cloth, 1043 pages. With 18 colour plates, 15 half-tone plates, 364 figures in the text, 6 maps, and 28 charts. Price, $11.00. A William Wood Book. The Williams & Wilkins Company, Baltimore, Maryland, 1940.

The earlier editions of this book on diseases encountered in the tropics are familiar to most physicians. The eleventh edition follows very closely the general plan of previous editions, but a few significant changes have been made.

Much of the ancient history has been deleted, allowing space for an entirely new section on "Life in the Tropics." Herein is discussed the requirements for life in tropical climates as well as the various effects of such climates upon the individual. In addition, an attempt has been made to summarize the influence of a tropical environment in altering or moulding the facies of common diseases encountered in ordinary practice. This new section is interesting, but there is some question that it adds much to the value of the book. The discussion is rather superficial in scope and there is little evidence to show that there is sufficient alteration in the common diseases to merit such a separate discussion.

Several sections, notably those on yellow fever and typhus, have undergone considerable revision, while other chapters, such as those on technique, have been omitted. The chapter on malaria has been rewritten and much non-essential matter has been eliminated.

The latest revision seems to have been well conceived and executed. It is to be recommended to anyone interested in diseases of tropical climates as an accurate reference book.

[2]Reviewed by John M. Furman, Jr., M. D., Fort Worth, Texas.
[3]Reviewed by Luther L. Terry, M. D., Galveston, Texas.

DEATHS

Dr. Clifford Gordon Engle of Henderson, Texas, died October 14, 1940, from injuries received in an automobile accident near Natchitoches, Louisiana, the same date. Dr. Engle was en route to Black Lake, Louisiana, with two friends for a fishing trip. Blinded by the lights of an approaching truck, the driver of Dr. Engle's car swerved into the ditch to avoid a collision, causing the fatal accident.

DR. C. G. ENGLE

Dr. Engle was born September 7, 1893, in Toledo, Ohio, the son of Irving Clark and Charlotte Engle. His academic education was received in the schools of that city and the University of Michigan at Ann Arbor. His medical education was obtained in the Eclectic Medical College, Cincinnati, Ohio, from which he was graduated in 1920. After his graduation he served an internship in the Deaconess Hospital, Cincinnati. He began the practice of medicine at El Dorado, Arkansas, where he lived until 1931. He then moved to Henderson, Texas, which was his home the remainder of his professional life.

Dr. Engle was a member continuously in good standing of the Rusk County Medical Society, the State Medical Association, and the American Medical Association from 1932 until his death. At the time of his death he was president of the Rusk County Medical Society. He was a member of the Methodist Church. He was a capable practitioner and his untimely death was a distinct loss to his community.

Dr. Engle was married in El Dorado, Arkansas, in 1923, to Miss Beatrice James, who died in 1925. On November 14, 1932, he was married to Miss Lucile Crim, who survives him. He is also survived by a son, Ronald Crim, aged 4, and his mother and stepfather, Mr. and Mrs. J. W. Campbell, Toledo, Ohio.

Dr. C. F. Faulkner, of Whitney, Texas, died October 11, 1940, at his home, of carcinoma of the spine.

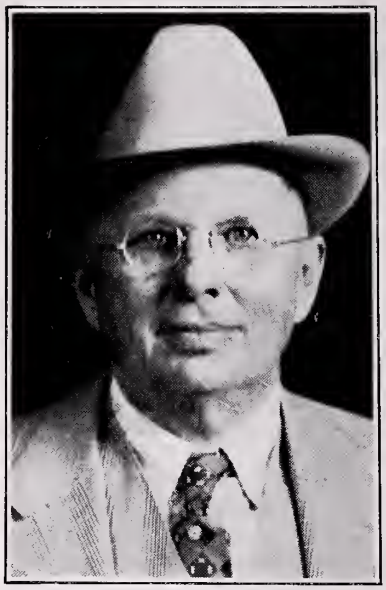
Dr. Faulkner was born December 22, 1869, at Douglassville, Cass County, Texas, the son of J. A. and Mary A. Ellis Faulkner. His academic education was received in Baylor University, Waco, Texas. His medical education was obtained in the St. Louis Medical College and the Louisville Medical College, from which latter institution he was graduated in 1898. He had lived and practiced at Fort Graham four years, Stiner five years, and at Whitney for almost the past thirty-three years.

Dr. Faulkner had been a member for many years of the State Medical Association and the American Medical Association, first through the Bosque County Medical Society and later through the Hill County Medical Society after his location in Whitney. He had served as physician for the Burleson and Johns State Prison Farm for two years. He was a member of the Baptist Church, which institution he was serving at the time of his death and for many years past as a deacon. He was a Mason, a member of the Commandery, and the Shrine, and a member of the Woodmen of the World.

Dr. Faulkner was married June 14, 1899, to Miss Bettie C. Turner, member of a prominent family of Bosque County. He is survived by his wife; two sons, Dr. W. T. Faulkner and Ellis P. Faulkner, Whitney; three brothers, Dr. S. A. and Will Faulkner, Whitney, and Ed Faulkner, Hillsboro; and two sisters, Mrs. A. L. Richards, Fort Graham, and Mrs. Laura Montgomery, Chickasha, Oklahoma. Dr. Faulkner was genuinely loved by the community he had long and faithfully served.

Dr. Robert H. Geer of El Paso, Texas, died October 10, 1940, at his home, of carcinoma of the liver.

Dr. Geer was born September 26, 1886, in Sparta, Tennessee, the son of Tye and Mattie Pope Geer. He came to Texas as a child. His academic education was received in the Polytechnic College, Fort Worth. His medical education was obtained in the medical department of the University of Texas, Galveston, from which he was graduated in 1913. After his graduation he served an internship in the Scott and White Hospital, Temple. He began the practice of medicine in Dallas, where he remained for one year. He then lived and practiced for one year at Eldorado, Texas, following which he located in El Paso, which was his home for the remainder of his professional life.



DR. ROBERT H. GEER

Dr. Geer was for many years a member of the El Paso County Medical Society, State Medical Association, and American Medical Association and was in good standing in these organizations at the time of his death. He was also a member of the Southwestern Medical and Surgical Association. He served as assistant health officer of El Paso County in 1920. He was a member of the Masonic order. His hobby was archery, and he was a past president of the El Paso Archery Club.

Dr. Geer was married in 1916 to Mrs. Minnie Lee Hays in Eldorado, Texas. He is survived by his wife; two daughters, Mrs. Dean Earp, El Paso, and Mrs. Jim Derrick, Carlsbad, New Mexico; two stepsons, Newell and Leslie Hays, and a sister, Mrs. Fred L. Fox, El Paso.

Dr. Carey Andrew Gray, of Bonham, Texas, died October 13, 1940, in a Bonham hospital, of cerebral thrombosis.

Dr. Gray was born September 15, 1864, in Dupont, Indiana, the son of William Andrew and Mary Ann Tewell Gray. His preliminary education was received in the schools of Seneca, Missouri. In 1886, he came to Bonham, Texas, and for a time operated a drug store. Deciding upon medicine as a profession, he entered the Louisville Medical College, from which he was graduated in 1895, being president of his senior class. After his graduation he located in Bonham, which was his home for the remainder of his professional life.

DR. CAREY ANDREW GRAY

Dr. Gray was a member continuously in good standing during his entire professional life of the Fannin County Medical Society, State Medical Association and American Medical Association. He was also a member of the North Texas District Medical Society, which he had served both as treasurer and as president. He had served several terms as president of the Fannin County Medical Society. He was Councilor of the Fourteenth District of the State Medical Association from 1907 to 1909. He served as chairman of the Section on Surgery of the State Medical Association in 1907. He was vice-president of the State Medical Association in the year of 1925-1926. For more than thirty years he had represented Fannin County Medical Society in the House of Delegates of the State Medical Association, in which capacity he had rendered signal service not only to his county society but to the State Association, as a member and chairman of various important committees. He was a trustee and chief surgeon of the Allen Memorial Hospital, Bonham. He had served as local surgeon for the Texas and Pacific Railway for more than twenty-five years. In the words of his medical confreres, he was a capable, conscientious doctor and one of Bonham's most substantial citizens. He had no peer in the section of the state in which he lived and practiced. He took an active part in the political life of his community, being a member of the Republican or minority party in Texas. As such

he was once a candidate of this party for Congressman from the Fourth District of Texas and on another occasion the Republican candidate for Governor of Texas. At the time of his death he was county chairman of the Republican Party.

Dr. Gray was a member of the Christian Church, a Mason of high degree, being both a Knight Templar and a Scottish Rite Mason. He had been a Rotarian for many years.

Dr. Gray was married twice. He was first married to Miss Sarah Radcliffe Smith in 1883. To this union were born two sons, Harry and Carey Gray, both of Bonham, and two daughters, Mrs. F. N. Hall, El Paso, and Mrs. F. R. Lafferty, Fort Ringgold, Texas, all of whom survive him. His second marriage was to Mrs. Lillian Stonehouse Davis, who survives him. He is also survived by a sister, Miss Estelle Gray, Bentonville, Arkansas. Dr. Gray lived a full life of exceptional usefulness to his community, his profession, and his state.

Dr. E. N. Gray, of Houston, Texas, died October 19, 1940, of heart disease.

Dr. Gray was born July 13, 1861, in Houston, Texas, the son of Charles Allan and Amanda Bostick Gray. His father was for many years publisher of the Houston *Telegraph*, one of the earliest Texas newspapers. Dr. Gray received his academic education in the Clark Seminary and private schools of Houston. His medical education was obtained in the old Jefferson Medical College, Philadelphia, from which he was graduated in 1883. After his graduation, he served an internship in the old Houston Infirmary. He began the practice of medicine in Houston, removing to Navasota in 1886. He returned to Houston in 1889 after taking postgraduate work in New York City, and had been in continuous active practice in that city until his death, which occurred while visiting a patient. At 79, he was the oldest practicing physician in Houston.

DR. E. N. GRAY

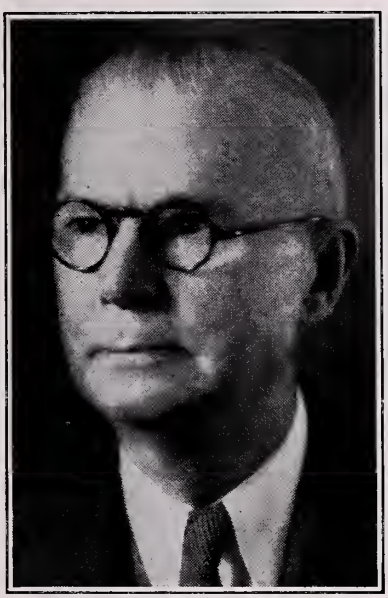
Dr. Gray was a charter member of the Harris County Medical Society, and a member continuously in good standing of that society, the State Medical Association, and the American Medical Association throughout his professional life. He was a past president of the Harris County Medical Society. He was elected an honorary member of the State Medical Association in 1935, which membership status continued until his death. He was a member of the staffs of the Memorial Hospital, Hermann Hospital, St. Joseph's Infirmary and the Jefferson Davis Hospital. Dr. Gray's life was rich in the experiences of a family physician. He literally died as most physicians would like to do, rendering service to his fellow man.

Dr. Gray's hobby was the collection of Texiana. His collection contained a number of valuable documents relating to the development of Texas from the days of the Republic. He, himself, was the author of several articles on early Texas history. He was a past president of the Sons of the Republic, a past president of the Harris County Historical Society, a member of the Texas Historical Society, a Royal Arch and Thirty-second Degree Scottish Rite Mason, and a member of the Woodmen of the World. He was a member of the Episcopal Church.

Dr. Gray was married September 29, 1915, to Miss Sara Christian in St. Louis, Missouri. He is survived by his wife and a son, Gordon Gray, both of Houston.

Dr. Rufus Dillard Moore, of Omaha, Texas, died September 10, 1940, at his home, of coronary occlusion.

Dr. Moore was born March 1, 1869, at Albertville, Marshall County, Alabama, the son of James and Lucy Guntharp Moore. His preliminary education was received in the schools of his community. He began the study of medicine by the preceptor method, later attending the Chattanooga Medical College, Chattanooga, Tennessee, from which he was graduated in 1896. He began the practice of medicine in his home county, Alabama, where he remained for two years. He then located at Rocky Branch, Morris County, Texas, where he practiced medicine for four years. At this time he removed to Omaha, which was his home for the remainder of his professional life. In 1903 and again in 1912, he took postgraduate work in Tulane University School of Medicine, New Orleans. He had been a constant student of medicine throughout his professional life.



DR. RUFUS DILLARD MOORE

Dr. Moore had been a member of the Morris County Medical Society, State Medical Association and American Medical Association throughout his professional career in Texas. He had served his county medical society as president in 1930, and continuously from 1933 to 1939. He was also a member of the Tri-State Medical Society of Texas, Louisiana, and Arkansas, the Southern Medical Association, and the Texas division of the Cotton Belt Surgeons' Association, which last named organization he had served as president. He had also served Morris County as health officer. During the last World War, Dr. Moore was a member of the draft board of Morris County.

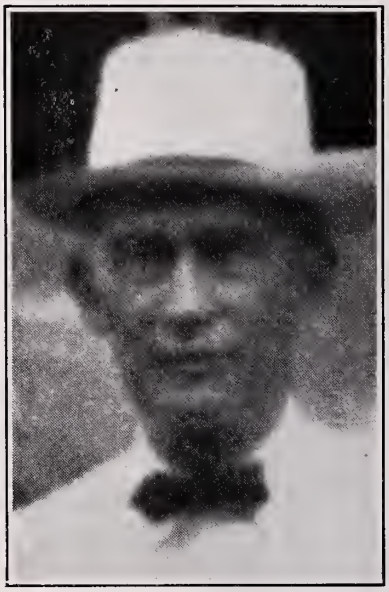
In addition to the professional services rendered his community, Dr. Moore took an active and prominent part in its religious and civic life. He had served many years as steward and trustee of the Methodist Church. For many years he served on the school board of his community. He had been city health officer of Omaha for the past ten years. He was a member of the Masonic order, which he had

served for a number of years as Worshipful Master. Dr. Moore will be genuinely missed by his community as a capable practitioner and one of its outstanding citizens.

Dr. Moore was married to Miss Jessie Thigpen of Omaha, in 1898. He is survived by his wife and two sons, J. Marion Moore, Little Rock, Arkansas, and Dr. Rufus D. Moore, Jr., Mt. Pleasant, Texas.

Dr. Preston W. Pearson, of Emory, Texas, died October 12, 1940, at his home, of cerebral hemorrhage.

Dr. Pearson was born November 17, 1882, at Jacobia, Hunt County, Texas, the son of Dr. P. S. Pearson and Maggie Moore Pearson. His preliminary education was received in the schools about him. His medical education was obtained in the Memphis Hospital Medical College from which he was graduated with honors in 1903, in the same graduating class as that of his father, Dr. P. S. Pearson of Greenville. He had practiced for a brief period of time at Pottsboro and Celeste, prior to his location in Emory, which was his home for the remainder of his professional life.



DR. P. W. PEARSON

Dr. Pearson was a member of the Hunt County Medical Society and after its reorganization, a charter member of the Hunt-Rockwall-Rains Counties Medical Society, and a member of the State Medical Association and American Medical Association for many years. He served the Hunt-Rockwall-Rains Counties Medical Society as president in 1935. He was a capable practitioner and held in the highest esteem by the clientele he served. Apart from his profession he was accounted a valued citizen, active in the civic and political life of his community.

Dr. Pearson was first married to Miss Sallie White in 1904, who died the same year. He was married to Miss Rubie Duffy in 1910, who died in 1937. In 1939, he was married to Miss Myrtis McKee, who survives him. He is also survived by four daughters, Mrs. Sallie Whittle and Mrs. Marjorie Davis of Greenville, Mrs. Ruth Brazil and Miss Louise Pearson of Emory; one son, Preston W. Pearson, Jr., Emory; three brothers, Herbert S. Pearson, Lubbock, and Douglas O. Pearson and Robert T. Pearson, Emory; and a sister, Mrs. Ursula Wade, Dallas.

Dr. Horace H. Hilliard of Canton, Texas, died October 14, 1940, of heart disease while returning from a rural professional call. He was found dead in his car on the side of the road.

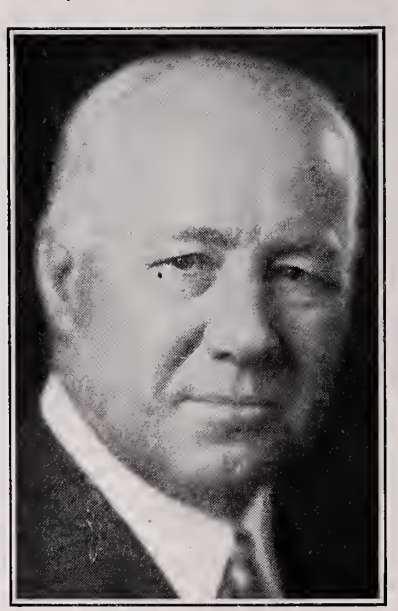
Dr. Hilliard was born March 12, 1890, at Old Providence, Texas, the son of G. M. and Ida Hilliard. His parents moved to Canton, Texas, when he was one year of age, and he received his preliminary education in the schools of Canton and the Denton Normal College, now known as the North Texas State Teachers College, from which he was graduated. After his graduation he taught school. Deciding upon medicine as a profession he entered Baylor University College of Medicine, Dallas, from which he was graduated in 1917. After his graduation he served an internship in Parkland Hospital, Dallas. During the last World War he served as a captain in the Medical Corps of the United States Army, at the conclusion of which war he was commissioned a major in the Reserve Corps. On October 21, 1919, he returned to Canton for the private practice of medicine, which was his home for the remainder of his professional life.

Dr. Hilliard had been a member of the Van Zandt County Medical Society, State Medical Association and American Medical Association, continuously in good standing from 1920 until his death. He was president of the Van Zandt County Medical Society in the years 1933 and 1934. He was greatly beloved by the community he had efficiently served as a physician. He also took an active part in the civic and religious life of his community. He had served as president of its school board and was an active member of the Baptist Church. He was a member of the American Legion and was buried with full military honors by that organization.

Dr. Hilliard was married October 6, 1926, to Miss Metta Bateman in Grand Saline, Texas. He is survived by his wife; a son, Joe Bob, age 13; two sisters, Mrs. A. J. Kellam, Canton, and Mrs. Ira Brunner, Mineola; and three brothers, Dr. George M. Hilliard, Dallas, and G. H. Hilliard and S. F. Hilliard, Canton.

Dr. Arthur Carroll Scott, of Temple, Texas, died October 27, 1940, at his home of coronary sclerosis and thrombosis.

Dr. Scott was born July 12, 1865, at Gainesville, Texas, the son of Rufus Franklin and Martha Helen (Moran) Scott. His preliminary education was received in the schools of that city. His medical education was obtained in the Bellevue Hospital Medical College, from which he was graduated at the age of 20, in 1886. He was intern and resident surgeon in the Western Pennsylvania Hospital, Pittsburgh, from 1886 to 1888. He began the practice of medicine at Gainesville, where he remained four and one-half years. In 1892 he was appointed chief surgeon of the Gulf, Colorado and Santa Fe Hospital Association and Railway Company with headquarters at Temple, Texas, at the age of 27. He had served continuously in this capacity for forty-seven years. During this period of time he was also a member of the board of trustees of the Gulf, Colorado and Santa Fe Hospital Association and Railway Company, resigning these offices in June, 1939, because of his health.



DR. A. C. SCOTT

Dr. Scott was a charter member of the Gainesville

Medical Club, the forerunner of the Cooke County Medical Society, which was organized in 1890, with Dr. Scott as its first secretary. He was a charter member of the Bell County Medical Society, at the time of the reorganization of the State Medical Association and American Medical Association, and was a member continuously of the respective units of organized medicine from the time he entered practice in 1888 until his death. At the time of his death he was president of the Bell County Medical Society. He had served the State Medical Association as Councilor of the Twelfth District from 1910 to 1919. He had been chairman of the Council on Scientific Work of the State Medical Association since its organization in 1926. Twice each year, he was host to the Council, including its permanent members and the section officers, at a mid-winter meeting at Temple, and again at a breakfast on the first day of the annual session in the city in which it was held, including on the latter occasion section officers for the incoming administration in order to familiarize them early with their duties for the forthcoming year. He gave of himself unstintingly in developing the scientific work of the State Medical Association and the high plane it has reached must largely be credited to his unceasing zeal. Dr. Scott served as president of the State Medical Association in 1924-1925. His interest and scientific ability was as evident in his latter years as in any period of his life as exemplified by the fact that a scientific exhibit prepared jointly by him and Drs. M. W. Sherwood and G. V. Brindley, his associates, was awarded a certificate of merit at the meeting of the State Medical Association in 1936 because of its outstanding teaching value.

Dr. Scott had limited his work to surgery since 1903. With his associate, the late Dr. R. R. White of Temple, he organized the Kings Daughters Hospital in that city and supervised its development from 1898 to 1904. In that year he and Dr. White founded the institution since known as Scott and White Hospital, which they operated jointly until Dr. White's death in 1917. He had been senior surgeon and president of this institution since 1904. Dr. Scott was a Fellow of the American Medical Association and the American College of Surgeons. He was a member of the Board of Governors of the American College of Surgeons from 1927 to 1933. He was a member of the Southern Surgical Association, which he served as president in 1928. He was a member of the Southern Medical Association; a member of the Pan-American Medical Association; the Texas Surgical Society; Central Texas District Medical Society, which he served as president in 1908; an honorary member of the Seattle, Washington, Surgical Society; and the Texas Association of Railway Surgeons, which he served as president in 1894.

Dr. Scott was recognized internationally as an authority on the diagnosis and surgical treatment of cancer. He was the originator of the shadow test for the diagnosis of breast cancer and a pioneer in the use of the hot (cautery) knife in the radical removal of cancer. He had presented outstanding exhibits on cancer at meetings of the State Medical Association, American Medical Association and, by invitation, at the International Postgraduate Medical Assembly at Philadelphia in November, 1938. His exhibit won first prize at the meeting of the Southern Medical Association the same year. Dr. Scott was a pioneer in the use of gas anesthesia, introducing it at the Scott and White Hospital in Temple in 1908. He was chairman of the Texas Committee of the American Society for the Control of Cancer from 1913 to 1925. He was indefatigable in his efforts to teach the public to seek medical attention at the earliest possible time in suspected cancer, having addressed innumerable audiences throughout Texas. In recognition of his outstanding scientific achievements the degree of Doctor of Laws was conferred on him by Trinity University, Waxahachie, in 1935. He was an honorary member of the A. M. P. O. medical fraternity.

Dr. Scott rendered signal service to the State of Texas as a member of the State Prison Board, and during this period of service was responsible for important reforms in the medical care of inmates in Texas penal institutions. He was a member of the Presbyterian Church, a Knights Templar and Thirty-second degree Mason. He was a member of the Rotary and Lake Polk Country Clubs, Temple.

Dr. Scott had two hobbies, the collection of rare stones and music. Philanthropically inclined, in addition to charitable medical services rendered to the poor, he was the unknown benefactor in a great number of small town charities and had helped many boys and girls secure an education.

Dr. Scott made the following contributions to medical literature during his professional life: Published in the *Transactions of the State Medical Association of Texas*—Resection of the lower jaw, with report of two cases, 1897; Report of a case of gunshot wound of the abdomen necessitating resection of fourteen inches of the gut, followed by recovery, 1898; Normal salt solution, 1901; Intestinal anastomosis by a new and simple method, report of a case, 1904; Published in the TEXAS STATE JOURNAL OF MEDICINE: Intestinal anastomosis by intra-intestinal ligature and rapid suture forceps, July, 1905; Operative measures for mammary cancer, November, 1907; A position for combined abdominal and pelvic-outlet operations, December, 1910; A new technic designed for total hysterectomy in difficult cases, especially for cancer of the uterus, in which two operators work simultaneously, through the abdomen and vagina, May, 1914; Indications and contra-indications for surgical treatment of goitre, February, 1915; What the public should know about cancer, July, 1915; Local anesthesia in major surgical operations, December, 1917; The radical cure of inguinal hernia, May, 1919; Diagnosis and treatment of goiter, December, 1919; Radical excision and sterilization of certain local and glandular infections, October, 1920; Curability of cancer, with report of 400 cases treated by cautery, November, 1921; The medical side of the cancer problem, June, 1922; The prevention of disease and the safe treatment of the sick, June, 1924; Rational surgery of cancer; its handicaps and limitations, December, 1925; Articles in other publications: Glandular block dissections for metastatic cancer, report of 160 cases done exclusively with cautery, J. A. M. A., November 7, 1925; Consistency in surgical treatment of cancer, Tr. South. S. A., 1928; Electrosurgery in treatment of malignant disease, Surg., Gynec. & Obst., February, 1931; Evaluation of agents that destroy or remove malignant disease, J. A. M. A., August 8, 1931.

The first paper published by Dr. Scott, in either 1894 or 1895, was entitled, "Compound Depressed Fractures of the Skull, with Report of Nine Cases." This article either appeared in the journal published by Dr. Daniel prior to the beginning of the publication of the TEXAS STATE JOURNAL OF MEDICINE, or the *Texas Medical Journal* published by Matt Smith, neither of which publications, unfortunately, is in the Library of the State Medical Association.

As a tribute to the memory of a surgeon who was not only a distinguished practitioner but at heart a teacher, the following statement by him, first to his wife and son, who objected to his going to the last annual meeting of the State Medical Association because of his physical condition, which he later repeated at the breakfast meeting of the Council on Scientific Work at the annual session referred to, is given for its inspirational value: "If I am alive I will go, if I have to go in an ambulance. I have attended forty-seven out of the forty-eight meetings

since I have been a member and this may be the last I will ever get to attend. I would rather be dead than miss this meeting. The State Medical Association of Texas and its meetings and the inspiration I have gotten from them have meant more than anything else in making me a success and I think more of this Association than anything else in life except my family and my hospital."

As further evidence of his desire to stimulate and encourage younger members of the medical profession, it was at his expressed wish, prior to his death, that ten of the youngest interns at the Scott and White Hospital served as active pallbearers at his funeral services. Further, as evidence of Dr. Scott's constant interest in the scientific advancement of medicine, because of his request prior to his death, a postmortem examination was made of his heart for any scientific information that might be ascertained for the benefit of medicine.

Dr. Scott was married to Miss Maud Sherwood of Gainesville, Texas, October 30, 1889. He is survived by his wife; two daughters, Mrs. Preston A. Childers, and Mrs. Walker Saulsbury, and a son, Dr. Arthur Carroll Scott, Jr., all of Temple.

The public distinction attained by Dr. Scott is revealed in the following excerpt from an editorial entitled, "An Exceptional Physician," which appeared in the newspaper of a large Texas city on the occasion of his death: "His career exemplified the abundant life according to its definition by the American individualist. He fortunately possessed the true scientific spirit which enables a man to contribute much more to life than he gains from it. Invariably, such seekers of the truth in science are gifted with boundless energy. They give renewed meaning to the over-used term, service.

"Dr. Scott brought distinction to his profession, his State and his home community. It is significant that a career of such wide usefulness was spent in a Texas town rather than in a large metropolis."

Dr. William Orville Wilkes of Waco, Texas, died October 17, 1940.

Dr. Wilkes was born August 5, 1863, in Cornersville, Tennessee, the son of Dr. William H. Wilkes, who came to Waco, Texas, in January, 1868. There were few railroads in the Southwest at that time and the trip to Texas was made by steamboat down the Mississippi to New Orleans, thence by boat to Galveston, then by rail to Bryan, the northern terminus of the railroad at the time, the remainder of the journey to Waco being by stagecoach. Dr. W. H. Wilkes practiced in Waco until his death in 1896. He served the State Medical Association of Texas as president in 1891.

DR. W. O. WILKES

Dr. W. O. Wilkes received his academic education in public and private schools of Waco, and Vanderbilt University, Nashville, Tennessee. His first year of medical education was received in the medical department of Vanderbilt University. He then transferred to the University Medical College of Kansas City, from which he was graduated in 1885. After graduation he served as house surgeon in the Wabash Railway Hospital, Kansas City. In the fall of the same year, he obtained a leave of absence from this hospital to continue medical studies in the College of Physicians and Surgeons, New York, now the medical department of Columbia University. His health failing he left New York in January, 1886, to recuperate in the South and Old Mexico. After a few months he returned to his duties as house surgeon at the Wabash Hospital, at the same time serving as assistant demonstrator of anatomy in his alma mater, the University Medical College of Kansas City. Dr. Wilkes began the private practice of medicine in Waco, Texas, in 1886, in association with his father, which association continued until his father's death. During his professional career he took postgraduate work at the New York Postgraduate Medical School and Hospital in 1891 and 1901, and spent the summer of 1912 in postgraduate study in the medical department of the University of Michigan at Ann Arbor.

Dr. Wilkes was throughout his professional life actively identified and keenly interested in medical organizations. Prior to the reorganization of the American Medical Association and the State Medical Association in 1904, he was a member of the Waco Medical Association. He was a charter member of the McLennan County Medical Society and his record of membership in that society was continuous from its organization until his death. He was elected an honorary member of the State Medical Association in 1937, and this membership status was continued until his death. He had served as secretary of the Waco Medical Association and the Central Texas District Medical Society several terms, and as president of the McLennan County Medical Society in 1919. He was a member of the Texas Railway Surgeons Association and the National Association of Railway Surgeons. He was a delegate to the International Congress on Tuberculosis in Washington, D. C., in 1908, and after that time had made a special study of pulmonary tuberculosis. During his active professional life he contributed many papers to the programs of his county medical society, the associations of railway surgeons in which he held membership, and the State Medical Association. He was for many years local and later division surgeon of the Missouri, Kansas and Texas Railroad, and local surgeon for the Cotton Belt Railway for twenty-seven years.

His principal interest apart from his profession was in books and library work. He was an active member of the board of directors of the Waco Public Library for more than thirty-five years. In 1930, Dr. Wilkes wrote a history of the Waco Medical Association from the time of its organization until its dissolution to form the present McLennan County Medical Society. This history was published in 1931. It was a valuable contribution to Texas medical history as it pertains to McLennan County, and as such is a monument to Dr. Wilkes' interest in medical organizations and their ideals and objectives.

Dr. Wilkes was married in 1889 to Miss Mary Bayly Thompson, who survives him. He is also survived by two daughters, Mrs. Leslie B. Gardner and Mrs. Herman Olenbush, Jr., both of Waco. His youngest daughter, Gayly, died in 1934, of injuries received in an automobile accident. Dr. Wilkes rendered a full life of service to the community in which he lived, both as a physician and citizen.

Texas State Journal of Medicine

EDITORIAL OFFICES: 1404 W. El Paso Street, Fort Worth, Texas
HOLMAN TAYLOR, B. S., M. D., EDITOR-IN-CHIEF
R. B. ANDERSON, JR., A. B., M. D., ASST. EDITOR

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Vol. XXXVI **January, 1941** **No. 9**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

The International Post-Graduate Medical Assembly of Southwest Texas, Inc., will present its ninth annual clinical meeting at San Antonio, January 28, 29, and 30. All of the activities of the meeting, with the exception of an attractive entertainment feature, will be held at the Gunter Hotel.

On the first evening, January 28, a stag party and buffet supper will be given, complimenting all registrants and guests. On Wednesday evening, a Dutch treat dinner-dance will be held.

The Assembly will again present an attractive public health program. On Tuesday, January 28, Dr. H. R. Casparis, Nashville, Tennessee, professor of pediatrics, Vanderbilt University Medical School, will talk from 5:30 to 5:45 p. m. over radio station W. O. A. I. on the subject, "The Medical Aspect of Child Training." On the same date, from 9:45 to 10:00 p. m., Dr. Temple Fay, Philadelphia, Pennsylvania, professor of neurology and neurosurgery, Temple University Medical School, will speak over radio station KTSA on the subject, "Headache."

On Wednesday, January 29, Dr. Franklin Ebaugh, Denver, Colorado, professor of psychiatry, University of Colorado Medical School, will talk over KTSA from 5:15 to 5:30 p. m. on the subject, "Your Mental Health." From 10:15 to 10:30 p. m., this date, Dr. A. Purdy Stout, New York, associate professor of surgery, College of Physicians and Surgeons, will talk over radio station W. O. A. I. on the subject, "Cancer."

The clinical features of the meeting will follow the same general plan of previous meetings. There will be morning lectures, general assemblies, noonday round table luncheon discussions, and afternoon sessions. A carefully planned, well balanced clinical program which should appeal to the medical profession generally, will be presented by seventeen guest speakers, all authorities in their respective fields. The subjects of the sixty-four addresses that will be given by the guest speakers are given on ad pages 46 and 47 of this number of the JOURNAL. It is suggested that study be made of these subjects, and it is believed that their content and the distinguished array of guests who will deliver them, will attract a record breaking attendance.

There is no registration fee. The ethical, reputable medical profession of Texas is cordially invited to attend. Membership in the Assembly, however, is available to any reputable physician, regardless of his place of residence, and the organization is deserving of the financial support of Texas physicians, particularly of the southwestern part of the State. The Assembly is successfully achieving its objective—bringing intensive postgraduate instruction to the physician at home.

The guest speakers for the January, 1941, Assembly are:

Dr. H. R. Casparis, professor of pediatrics, Vanderbilt University Medical School, Nashville, Tennessee.

Dr. John A. C. Colston, associate professor of urology, Johns Hopkins Medical School, Baltimore, Maryland.

Dr. Wm. H. Crisp, formerly Editor-in-Chief of the *American Journal of Ophthalmology* and Ophthalmic

Year Book and Consultant, Denver General Hospital, Denver, Colorado.

Dr. Franklin Ebaugh, professor of psychiatry, University of Colorado Medical School, Denver, Colorado.

Dr. Temple Fay, professor of neurology and neurosurgery, Temple University Medical School, Philadelphia, Pennsylvania.

Dr. Walter A. Fansler, clinical associate professor of surgery, University of Minnesota, Minneapolis, Minnesota.

Dr. Tinsley Harrison, associate professor of medicine, Vanderbilt University, Nashville, Tennessee.

Dr. Roy D. McClure, surgeon-in-chief, Henry Ford Hospital, Detroit, Michigan.

Dr. Francisco de P. Miranda, professor of clinical medicine, National University of Mexico, Mexico City, D. F.

Dr. H. B. Nichols, director of the Department of Roentgenology, Cleveland Clinic, Cleveland, Ohio.

Dr. John R. Page, chairman of the Board of Surgeon Directors, Manhattan Eye, Ear and Throat Hospital, New York City.

Dr. Francis M. Rackemann, physician to the Massachusetts General Hospital, Boston, Massachusetts.

Dr. Thos. B. Sellers, senior gynecologist, Southern Baptist Hospital, New Orleans, Louisiana.

Major S. F. Seeley, U. S. A., M. C., Station Hospital, Fort Sam Houston, Texas.

Dr. Roy W. Scott, professor of clinical medicine, Western Reserve University, Cleveland, Ohio.

Dr. A. Purdy Stout, associate professor of surgery, College of Physicians and Surgeons, New York City.

Dr. John Wilson, clinical professor, orthopedic surgery, University of Southern California, Los Angeles, California.

There will be, also, instructive scientific, and helpful technical exhibits. Physicians of Texas who attend this meeting will be amply rewarded by the clinical study offered, and the inspiration and good fellowship assured.

N. Y. A. Medical Service in Texas is provided for in an agreement between the Council on Medical Economics of the State Medical Association of Texas, and the National Youth Administration in Texas, published in this number of the JOURNAL, beginning on page 639. The agreement has been approved by the President, the Secretary and the Chairman of the Board of Councilors of the State Medical Association, and the Director and Medical Consultant of the N. Y. A. That makes the agreement as nearly official as it can be made prior to a meeting of the Executive Council of the Association. This is considered quite sufficient unto the occasion, in view of the fact that, after all, decision rests with county medical societies. We earnestly call this report to the attention of our readers, and commend the same to the favorable consideration of county medical societies. We make the recommendation with, however, not the faintest insistence.

While the agreement is self-explanatory, it might be advisable to call attention to a few important facts therein, and in connection therewith.

To begin with, it will be noted that there are in the State approximately 15,000 clients of this particular governmental agency, and that the annual turnover reaches double that number. These are divided into 400 local projects, in 150 communities in various sections of the State. The division concerned is not material to this discussion. Only certain of the clients of the agency are entitled to the service sought to be covered. The family income must not exceed $750 per annum.

Manifestly, these young people must be cared for medically as well as in other particulars. The money appropriated for medical and health care of the group is appropriated on a per diem basis, which fact has constituted a stumbling block in the way of our Council in attempting to come to an agreement with the government. It seems, however, that the plan agreed upon advances a reasonable solution of the problem. In short, representatives of the N. Y. A. will call upon county medical societies in the counties in which there are activities, and ask for coöperation in extending the service concerned. The county medical society can take it or leave it. If they take it, plans and procedures will be set up in detail by representatives of the N. Y. A. and of the county medical society. The agreement sets out limitations both ways. Only those members of county medical societies who care to participate in the work will be placed on the panel to be called. Each N. Y. A. employee or his parents will have the right to choose from among those members of the society so listed, and a smaller list will be set up from which choice will be made in rotation, by those in authority, where the patient has no choice. This is a procedure which has been approved by our Association in rendering this sort of service to government wards heretofore. No physician may be required to serve. The regular service to be rendered consists of office visits, residence calls, either at the patient's house or at the N. Y. A. centers, hospital calls, operations and laboratory service. There is a special service to be rendered on a retainer fee basis, which is to be explicity in type and strictly scheduled as to time. This retainer will be set up on an hourly employment basis, with allowances for additional compensation for extra service.

The matter of compensation seems to be very ingeniously provided in the agreement. It is the belief of our Council on Medical Economics that county medical societies can thus establish a compensation equal to that received by practicing physicians from the same class of patients, and perhaps even better than that. Payment will be made within thirty days of rendition of bill. A reason-

able extension of service beyond the period of employment is provided for. In accomplishing the agreement, it will be understood that funds may run short, rendering it impossible to fully compensate for service rendered, but it is anticipated that not a great deal can be involved in any such contingency, in view of the thirty-day payment provision, and the requirement that the Association be notified thirty days in advance of anticipated exhaustion of funds. It is further believed that funds will not become exhausted except in the face of epidemics, or something of the sort. There will be no petition from the N. Y. A. for a reduction in terms of remuneration.

All questions involving differences of opinion will be settled by the county medical society, or, in failure there, by proper representatives of the State Medical Association. Close coöperation between the National Youth Administration and the State Medical Association is planned. Dr. G. F. Thornhill of Austin, is the Medical Consultant of the National Youth Administration. His incumbency is considered a fortunate circumstance. It is hoped, and expected, that this government service will not result in the embarrassment and confusion of the same sort of service under F. E. R. A. The conditions are different. Certainly the terms are more favorable to the medical profession, much more so.

Again the Legislature, with all of the implications, good, bad and indifferent! Indeed, it seems that opportunity for radical, bizarre and short-sighted legislation is greater at this particular time than ever before. Democracy (not the party) is floundering and stumbling about as it has never done before. Democracy is being man-handled, and is more or less jittery. We are trying to determine what we shall do to be saved. We are having a hard time doing it, and who can blame us? No one has ever held that a Democracy is particularly competent as a government, at least in the matter of prompt and efficient establishment of policies and their equally as prompt and efficient execution. But it is held by thoughtful people, practically throughout the world, where opinions are freely formed and freely expressed, that there are items to be considered which are infinitely more important than these, among them liberty, with all that the word implies. We can well afford to make sacrifices of efficiency through debate, conference, and consultation of public opinion, provided that in the procedure we do not destroy the very thing we are trying to preserve. It is because of this almost dilemma that we are in a measure jittery. And it is under just such circumstances that people with peculiar and unorthodox views get a hearing they could not get under more stabilized conditions.

Which brings us back to our purpose in mentioning the matter at all. Again let it be said that the Legislature of Texas is soon to convene. It is certain that much legislation of the sort mentioned above will be attempted. Among the objectionable measures sure to be introduced, will be a bill to legalize healers in the State who have heretofore been operating without legal authority. They very much want protection, although it must be conceded that for the most part they have not been in jeopardy under the law. True, the State Board of Medical Examiners has made it hot for a large number of them, much larger than we think for until we see the statistics, but after all, the penalties have not been great, and the percentage has been small. In their claim for such legislation, these supplicants will not say anything about our present very excellent Medical Practice Act, which is designed to provide a way of licensing all who have by proper schooling fitted themselves for the serious obligations they would assume. Nothing will be said about the established fact that what they are doing in their several practices is exactly what our present law seeks to assure itself that they are competent to do, and it is certain that no such measure will carry any provisions which will constitute any such assurance.

Neither will anything be said about the provision of the Constitution of Texas that in the making of laws to govern the practice of medicine, there shall be no discrimination between schools of medicine. Manifestly, if a standard set up for one school of practice, no matter what it is called, or what the agencies used may be, is less exacting than the standard set up for the other schools, there is a discrimination. In short, no such law as contemplated will be constitutional. The present law sets up a high yet fair standard, based entirely upon the study of those branches about which there is no material difference between the so-called schools of medicine worthy of consideration. The present Board of Medical Examiners combines representatives of regular, homeopathic, eclectic and osteopathic schools of medicine, no one school having a majority of representation thereon. Nothing could be fairer.

To be entitled to any special success in this connection, a group of healers must establish the fact that they are not practicing medicine. If they are seeking to determine what is the matter with their patients, and then what should be done about it, and then doing it or causing it to be done, they are practicing medicine, it does not matter what

agencies are used, whether powder, pills or manipulation of any sort. Even prayer, except where used in connection with well established and recognized religions, may constitute the practice of medicine. In determining whether or not this is true, it at once becomes a matter of fact, and not general assumption.

But the story is entirely too long to tell here. It is hoped that legislative committees of our county medical societies will see to it that our representatives in the Legislature are thoroughly advised that they may not inadvertently succumb to the specious pleas of the groups which will think of self and not of public service. Regardless of whether or not the medical profession is acting in behalf of the public health, the sort of competition sought by these people to be recognized is "unfair." Were we a labor union, we would picket each such office. We are not a labor union, which we say with all due deference to such organizations, hence must content ourselves with the well known and too frequently ignored appeal to reason.

So far as we know, the medical profession itself will ask for no legislation, except the appropriation of money in ample quantities for the support of our State Health Department, and perhaps of our State Medical College, and an enabling act which will permit county medical societies to provide medical service for the financially underprivileged, on a practicable and feasible prepayment basis. We are not at the moment advised about the latter, but the State Medical Association is very anxious to insure the widest possible distribution of medical service, and do it on its own rather than have the government do it, either local, state or national. The only fair indictment which has been made of the medical profession in connection with the recently very active campaign in behalf of socialized medicine, is that it knows to do more than it does. We may, in this connection, insist upon it that failure to cover the ground adequately has in no sense been the fault of the medical profession, and in no sense incident to the system of practice set up by the medical profession through many years of self-sacrifice and conscientious endeavor. The Legislature may be asked to help. It is not our desire to enter the field of insurance, and any legislation for which we will ask will not put us there. The practice of medicine cannot be sold on an insurance basis, because there is no way to define insurable sickness, as there is to insure against death, or loss of property by fire, tornado and the like. The one is so very indefinite, while the other is entirely definite. The only way doctors themselves can insure against sickness is to promise to treat the sick who are insured, and take for their trouble whatever money is available through prepayment on an insurance basis. Insurance companies proper cannot do that and render satisfactory service.

Doubtless legislation will be attempted in the field of venereal diseases. The medical profession itself has in years gone by been overzealous in this particular field. It has learned something in this connection. Now we find well-meaning laymen, and some who are not so well-meaning, and who are demonstrably self-seeking, are trying to tell our Legislature that wholly unjustifiable restrictions should be placed on our people, in order to correct a condition which state and local health departments and the medical profession itself, are quite satisfactorily handling with the laws we already have. True, some of these laws can be bettered in their make up and application, but the leadership in such legislation should reside in the State Board of Health and its advisers, the reputable medical profession of the State.

There are, of course, many other points of danger to the public health. We cannot discuss them all here. We must be content to urge our leaders, and the proper officials of our county medical societies, to do what they can to see to it that our legislators give ear to the reputable and demonstrably unselfish medical profession, rather than those who would for selfish reasons abort medical science and impede the good it is doing.

Prescribing Alcoholic Liquor.—Since the beginning of the prohibition era, physicians have been plagued with the problem of prescribing alcoholic liquors. The prohibition law acknowledged the medicinal qualities of alcohol in its various forms, and provided that physicians might prescribe it as they do other medicinal agencies, but with restrictions designed to prevent them from prescribing it as a beverage. It is disclosing no secret to state that the restrictions involved were not entirely successful in the purposes thereof. Be it said to the credit of the medical profession that in all of the legislative sniping carried on in this connection, it has maintained its high professional stand, that while the physician should not be impeded in his efforts to serve his patients, and while the Legislature should not undertake to practice medicine through any law, reasonable restriction in a phase of practice which is so subject to abuse as that under consideration, requires and should have legislative attention.

It would be disastrous should the Legislature undertake to say what constitutes proper methods of practice, or procedures in the practice of medicine. Not even the medical profession as a group can entirely agree on that, as witness the existence today

of a number of so-called "schools of medicine," which represent, as a matter of fact, a grossly preponderant group of physicians who believe that there should be no limitation in the mind of the physician as to how he should apply the art and the science of medicine, with a number of much smaller groups which set up some sort of special theory with definite limitations. Even so, there are circumstances under which there must be control, and in the absence of legal authority for the medical profession to clean its own house, and keep it clean, something may have to be done about it through other legislative enactment.

A recent decision of a court in this State is the occasion for this discussion. A physician had been convicted of violating the liquor laws in a portion of the State in which the sale of liquor is still prohibited. The case was appealed, and one of the reasons given to sustain the appeal was that the liquor laws involved were void and in violation of the Bill of Rights of the Texas Constitution, in that a practicing physician should have the right to prescribe any drug which he thinks should be prescribed for any given patient, and in sufficient amount to get results. While it is true that the trouble in this case was that the physician involved gave his patient two prescriptions in one day, each carrying the limit allowed for a twenty-four hour treatment, the principle of the constitutionality exists as certainly as if the right to prescribe liquor at all were involved.

The court in rendering its decision, observed that "Even liberty itself, the greatest of all rights, is not unrestricted license to act according to one's own will." For that reason, liberty must be regulated by law, and all of the rights enjoyed under our organic law are strictly regulated to begin with. The regulation is necessary to prevent the over-lapping of rights and, therefore, the nullification of some of them. The State regulates the practice of medicine, among the other professions, as a safeguard to those who practice medicine as well as to those who are treated. The Government must set up metes and bounds. The right to practice a profession does not extend to the practitioner the right to act without restraint of law, even within professional bounds. It was held that the State has the right, in the light of this view of the problem, to regulate the amount of intoxicating liquor which may be prescribed, not as a professional ruling, but as a reasonable effort on the part of the State to coördinate regulation of the profession with other laws and regulations. In this connection, we recall that at another time the Legislative Committee of the State Medical Association offered to support an amendment to a liquor measure which would prohibit entirely the prescribing of alcoholic liquors. The measure in question sought to restrict the amount of liquor prescribed to one ounce per twenty-four hours. Those in charge of the legislation refused to agree, suspecting that there was a trick in it somewhere.

We mention this matter here because there is complaint that physicians in a few localities in the State are prescribing liquor in violation of the law. The justification of any such complaint as that must rest upon fact, of course. If it can be established that a physician is prescribing liquor without having made such an examination as would disclose the need of the same by the patient involved, as a remedy and not as a beverage, he is, in fact and in deed, violating the law. If, on the contrary, a physician makes such physical examination and concludes that the patient should have alcohol in some form, and given amount, then there is no violation of the law. It would seem to be a simple thing to determine the existence of any justifiable facts in any such case, and then act accordingly.

We neither condemn nor condone the medical profession in any such practices. Until the law agrees to relinquish to the medical profession the control of the profession, as per the medical guild of old, there is not much we can do about it. In the meantime, it should be remembered that the medical practice act provides for the revocation of license to practice medicine, upon conviction of any practice which may be classified as grossly unprofessional conduct.

Our Membership For the Coming Year is likely to prove a matter of exceptional importance. Membership is always important, of course, but right now, when the medical profession is facing a supreme test in connection with medical service for our armed forces and other activities of the government, it is particularly a matter of concern. We pass over quite lightly the fact that we lost one of our six delegates to the American Medical Association because our membership last year did not come up to membership possibilities. Just a little extra thoughtfulness on the part of our members could have obviated that loss. However, we are not going to be able to so easily pass over embarrassment sure to arise if we do not secure for membership in our organization practically every physician in the state who is eligible. We are thus admonishing our readers, appreciating that the problem is not merely that of the county society secretary and the district councilor. Neither these nor any other officials out on the membership firing line are paid any salaries, and

only in exceptional cases expenses for any activities. We must help them.

If and when the government calls upon us as a profession for military or other service, in connection with the war emergency, it will be up to us to produce. We have already done so, and will continue to do so, but with a full membership we will be in a position to go about it in a businesslike, efficient manner. As is well known to our readers, supreme effort is being put forth to determine the professional and economic status, and the desire for character of service, of each licensed physician in the State with the degree of Doctor of Medicine. With practically every reputable physician in each county a member of our organization, and thus classified, we should be able to furnish the Army and Navy with its personnel, both in training and in active warfare, the civil population, the expanding industrial setup, and the public health service, with a minimum of effort and maximum efficiency.

Incidentally, our paid membership is due to be reduced to a large extent by the number who have been called into military service, even in connection with the training program, whether or not there is a remission of dues. It is hardly likely that we will be able to compensate for these losses through the acquisition of new members, but we can help a lot that way. The primary possibility of keeping the membership up to the maximum will rest upon the payment of dues of those who are already members. We earnestly solicit prompt attention to that matter.

On January 1, to be technical about it, the State Medical Association of Texas had 155 members. But to be realistic about it, we have all of the members we had last year, and it will continue so until annual reports of county society secretaries are received in the office of the State Secretary, April 1. As we have said in these columns many times before, membership actually ceases to exist on January 1, but in view of the fact that county society secretaries need not report until April 1, they alone know who are members and who are not members. Certainly the State Secretary does not know. This state of affairs constitutes a sort of membership moratorium. During these three months, and with the help of our members, county society secretaries should be able to enroll all of their members who are willing to pay. After the report of the county society secretary is received in the office of the State Secretary, all who are not listed thereon at once become nonmembers (not delinquent members). They can renew their memberships at any time during the calendar year by simply paying their dues. After the expiration of the calendar year they may not do that. They must join all over again. Early payments this year have been as follows, to establish again the Ancient and Honorable Society of Early Birds:

Anderson-Houston-Leon, December 12, 5; December 21, 7; December 30, 3.
Austin-Waller, December 19, 11.
Bowie, December 30, 1.
Caldwell, October 16, 1.
Childress-Collingsworth-Hall, December 31, 2.
Collin, November 26, 2; December 12, 7; December 26, 1.
Dallas, December 19, 5.
Ector-Midland-Martin-Howard-Andrews-Glasscock December 10, 1.
Ellis, December 13, 2.
Erath-Hood-Somervell, December 17, 1.
Fort Bend, November 6, 1.
Dawson-Lynn-Terry-Gaines-Yoakum, December 13, 12; December 23, 1; December 30, 1.
Galveston, December 5, 2.
Gonzales, December 16, 8.
Gray-Wheeler, December 19, 5.
Harris, December 16, 1.
Hildalgo-Starr, October 14, 1; December 16, 8; December 19, 1.
Hunt-Rockwall-Rains, December 10, 3; December 18, 1; December 20, 1.
Hutchinson-Carson, December 30, 11.
Kerr-Kendall-Gillespie-Bandera, December 13, 1.
Lee, December 9, 1.
Liberty-Chambers, December 18, 15.
McLennan, December 9, 2.
Morris, December 21, 3.
Panola, December 12, 6.
Rusk, December 18, 5; December 23, 1.
Tarrant, September 19, 2; October 3, 1; November 6, 2; November 13, 1; November 23, 1; December 5, 2; December 16, 1; December 26, 2.
Taylor-Jones, December 18, 1.
Wilbarger, November 30, 1.
Williamson, December 20, 1.

The Membership Status of Those of Our Number Who Have Been Called to the Colors constitutes a real problem. It has already begun to receive the attention of our county medical societies. A large number of our members have already been called out, and the number is increasing daily. On the one hand, it seems rather unfair to require these members to continue to pay dues, certainly dues in full, while on the other hand the affairs of the Association have been adjusted to budgets based on our full membership. Thus sentiment must be balanced against business. We have our own idea about what will happen in the balancing, but it is not our province to anticipate.

Suffice it to say here that several county societies have already so changed their respective by-laws as to permit the remission of the county society portion of the annual dues, which is about as far as the effort can go at the present time. The by-laws of the State Medical Association must be changed before state dues can be waived, or paid by the Trustees, out of the reserve, which is a

better way to state it, even though the results are the same. That cannot happen until the next annual session. Whether the Association can carry on at its present level, and in the light of good business if the dues in question are remitted, must be decided by proper authority. If it can, and it is the will of the House of Delegates that it so be done, all well and good; if not, something else must be done. Dues might be increased so as to partly compensate for the losses thus due to accrue, or, as we have said, the work of the Central Office might be sufficiently curtailed to accomplish the same results. We think it is hardly likely that much saving can be effected through such an expedient, for the reason that additional demands are sure to be made upon us in connection with existing emergencies. There are other factors involved in the problem, but there are agencies of the Association due to give them consideration, and at any rate it is hardly our province to decide matters of policy. We may properly do no more than to call attention to situations as they develop.

Perhaps it will be of interest in this connection to present here a resolution recently passed by the Tarrant County Medical Society, which resolution sets out in very concise form the jeopardies of the movement to which we have called attention in this discussion:

"*Whereas*, Many members of the Tarrant County Medical Society during the next few years will serve in the various military departments of the U. S., either temporarily or permanently, and

"*Whereas*, These members and the Society desire and will desire to keep their memberships intact in the Tarrant County Medical Society and the State Medical Association of Texas,

"*Therefore Be It Resolved* that the State Medical Association of Texas be requested to adopt the necessary legislation at the earliest moment, to keep the memberships continuous and intact without cost to any member in good standing who leaves his practice to become active in any branch of military service, and that the membership be continued until such time as the member is discharged from the service.

"*Be It Further Resolved* that in the interim the Tarrant County Medical Society amend its by-laws to provide for omission of the county society portion of the annual dues for such members as described in these resolutions."

The Southern Medical Association met in Louisville, Kentucky, November 12, 1940, with a registered attendance of 4,062, of which number 82 were from Texas. Those of our number who attended the meeting report that it was one of the best the Association has ever held. The program was carried out in detail, and the published hospitality and good fellowship of hosts and guests was remarkable to behold and experience. We are making this rather belated reference to the meeting for the reason that the necessarily delayed issue of the November JOURNAL prevented us from printing our usual preliminary notice of the meeting. However, the meeting was advertised in the JOURNAL (paid) for October, and our members should have been in that manner forewarned and preadvised. We are anxious that our readers do not in any way assume that the State Medical Association has lost any interest in this great organization. It certainly has not.

As many of our readers will know, the scientific program for the meeting was exceptionally fine. There were a number of papers and discussions by Texas doctors.

The next annual meeting will be held in St. Louis, Missouri, sometime in November, 1941.

Dr. Paul H. Ringer, Asheville, N. C., is President of the Association, and Dr. M. Pinson Neal, Columbia, Missouri, is President-Elect. Mr. C. P. Loranz of Birmingham, Alabama, remains the Secretary-Manager, and Dr. M. Y. Dabney of Birmingham, will continue to edit the *Journal*, with the assistance of Mrs. Dabney. Dr. Guy F. Witt of Dallas, is councilor for Texas, and Dr. Hugh Leslie Moore of Dallas, is chairman of the Board of Trustees.

VITAMIN B_1 DEFICIENCY AND DIABETES

A symmetrical peripheral neuropathy (disease of the nerves of the extremities) resulting from vitamin B_1 deficiency was found in nine, or 2.1 per cent, of 422 diabetic patients, Harry D. Fein, M. D., Elaine P. Ralli, M. D., and Norman Jolliffe, M. D., New York, report in *The Journal of the American Medical Association* for Dec. 7. Administration of vitamin B_1 by mouth resulted in a cure of eight patients and improvements in the ninth.

Their findings were made in a study conducted to determine the incidence of the nerve ailment due to vitamin B_1 deficiency in a large group of diabetic patients and the response to specific treatment.

Pointing out that the diets prescribed for all of these patients were considered adequate as to the vitamin B_1/calory ratio, the three physicians say that "substitution of foods poor in vitamin B_1 (such as white bread or crackers) but containing equivalent carbohydrate and caloric values for prescribed foods richer in vitamin B_1 is common in all groups of diabetic patients. This was especially true in our patients because of their poor economic condition. In view of this it is surprising that a peripheral symmetrical polyneuropathy developed in but 2.1 per cent of the patients."

They point out, however, that there are several other possible contributory factors, the most important of which they believe to be arteriosclerosis (hardening of the arteries). This vascular inadequacy, the three physicians say, may require a higher concentration of thiamine or vitamin B_1 in the blood, to provide sufficient vitamin to the nerves, than in subjects with normal arteries.

Among the other possible factors they mention is the polyuria (excessive secretion and discharge of urine) accompanying glycosuria (presence of sugar in normal urine) which, if persistent, may cause an increased excretion of vitamin B_1 in the urine, rendering it less available for use by the body.

X-RAY DIAGNOSIS OF DISEASES OF THE ESOPHAGUS*

DAVIS SPANGLER, M. D., F. A. C. R.
DALLAS, TEXAS

The esophagus is a muscular tube along which substances pass from mouth to stomach. Upon the adequate passage of this food depends the nutrition of the body. Hence the importance of accurate diagnosis of its abnormalities as evidenced by difficult swallowing.

There are only two worth while methods of diagnosis[6]: roentgen ray examination and esophagoscopy. The x-ray examination is made first because of its simplicity and relative comfort, and the esophagoscopy is used to confirm or disprove the conclusions drawn from the x-ray findings which, according to Jackson[6], are from 85 to 90 per cent correct.

The x-ray examination should be made in the upright and supine positions and in certain cases in the Trendelenburg position[14]. Plates should be made in deep inspiration and from 1 to 4 seconds after opaque material is swallowed.

Many vehicles for the opaque salts, barium and bismuth (still used more from sentiment than practicability), are found efficacious (1) water, (2) various milks, (3) mucilage of acacia (thick and thin), (4) capsules, (5) gelatin, (6) cotton balls, and (7) cereals. The most suitable vehicles will be recommended under discussion of the various pathologic conditions.

There are two groups of esophageal conditions: (1) congenital, and (2) the acquired, which latter may be further subdivided into (a) intrinsic, and (b) extrinsic.

Keith[8] shows most admirably the embryological development of the esophagus, from a sphincter or constriction between the pharynx and stomach at the fourth week, to its relatively adult length by the seventh week. Any arrest of this elongation will produce a thoracic stomach. Failure of proper union of the retrotracheal and pregastric portion will give an atresia with the thin barium mixture and food passing through the trachea into the stomach, resulting in enough food in the air passages to insure early death.

The intrinsic pathologic lesions revealed by x-ray examination can be discussed under seven topics: (1) Pharyngeal pouch; (2) malignancy; (3) ulcer; (4) cardiospasm; (5) strictures; (6) varices; (7) foreign bodies.

*Read before the Section on Radiology and Physiotherapy, State Medical Association of Texas, Dallas, May 15, 1940.

Pharyngeal pouches (Zenker's pouch[1]) are located just below the cricoid cartilage beginning in the mid line and as they enlarge extend to either side, usually the left. These may be caused by pulsion or be due to traction from spinal arthritis. They contain only mucous membrane and alveolar tissue and no muscle; hence they cannot empty themselves. Muscle spasm tends to close the opening as they protrude between the circular and decussating fibers of the crico-pharyngeus muscle. Fluid media, water or milk mixtures of barium are used in the examination; these fill a rounded or oval sac in the lower part of the neck until the level of the mouth of the sac is reached and then the medium spills over into the esophagus. This is the only esophageal lesion emptying from above; in all others the medium passes out its lower end[1]. Of equal importance to the diagnosis, is finding the position in which the patient empties the pouch as this is vital in the nonsurgical treatment.

Malignancy arising in the esophagus is usually cancer. It occurs in men three times as frequently as women, and in the middle, lower and upper thirds of the esophagus as regards frequency of location. Thin milk barium mixture may pass easily, showing little if any dilatation above cancer. A thicker mixture of barium in acacia, of the consistency of chewing gum, will show concentric narrowing with irregularity of outline[11]. A "00" barium filled capsule may be stopped completely. Gelatin filled with barium may be cut in various sizes with a cork borer and swallowed without chewing to obtain some idea as to the size of the lumen. The upper border of the stricture is marked on the patient's skin. He is then given a thin barium mixture and placed in the Trendelenburg position, in which position the medium will rise in the esophagus to the lower edge of the constriction, thus giving some idea of the length of esophageal wall invaded by the cancer[14].

Ulcer of the esophagus is rather rare. It usually follows trauma caused by a foreign body, or in the lower third, it may be of the true peptic type. If the examination be negative with all the usual media, the patient should be given toast or crackers[1]. This will produce symptoms from irritation. Then a niche in the esophageal outline, with spasm above it[16], can be seen, especially in the recumbent position, using fluid barium media. Cold drinks may also cause spasms[13].

Cardisospasm, first described by Purton in 1821[1]. is probably a misnomer. It is due to lack of relaxation, as suggested by Einhorn in 1888, rather than muscle spasm. The underlying pathology is still in dispute.

X-ray examination with any medium shows a tight, smooth constriction of the esophagus at the point of passage through the diaphragm with dilatation and elongation above, depending in extent on the age of the obstruction. The lower end of the filled esophagus is smooth in outline and may show retention of media for twenty-four hours or longer. It may be temporarily relaxed by the nitrites[9] (nitroglycerine under the tongue or amyl nitrite inhaled) to permit passage of food and accurate study or therapy. Any of the media may be used but the more fluid forms are preferable.

Strictures, non-malignant in type, result from swallowing of corrosive substances. Soon after ingestion of the caustics the esophagus is dilated throughout, as can be shown with the fluid barium mixtures. Later there is a smooth concentric narrowing, often involving inches of the lumen, or multiple band-like areas[4]. These are not dilatable if the burn has extended into the submucosa. They may rarely be of syphilitic or tuberculous origin. The caliber of the stricture is best outlined with the thick mucilage of acacia mixture, which is easily liquified to pass into the stomach. The barium filled capsule should not be used in this condition. Usual sites for these strictures are: (1) Junction of the pharynx with the esophagus; (2) crossing of the left bronchus, and (3) lower end of the esophagus.[17]

Varices are usually seen in the lower half of the esophagus and, save for hemorrhage, are symptomless. They are associated with chronic hepatic disease as they form a part of the collateral circle through anastomosis of various cavo-portal roots[5]. These esophageal veins form a submucosal and periesophageal plexus, anastomosing with gastric and splenic veins. The mucosal folds of the esophagus normally run up and down in straight and uninterrupted lines. In varices these folds appear tortuous, swollen and snakelike, with irregular edges. Varices are best seen with the patient recumbent and using a water barium mixture which permits barium to precipitate between the dilated veins[4]. If the lower half of the esophagus shows a linear defect on the right posterior half, this means pressure from a dilated azygos vein and requires careful check to rule out hepatic cirrhosis. Varices must be differentiated from: (1) a gas bubble swallowed with media; (2) diaphragmatic (paraesophageal) hernia; (3) polyps and cysts.

Foreign Bodies.—Coins, toys, bones, dental plates, etc., anything that can be placed in the mouth, can act as an esophageal foreign body if swallowed and too large or too sharp to pass into the stomach. The usual locations are at the level of: (1) the sixth cervical vertebral body, corresponding to the suprasternal notch; (2) aortic arch; (3) left bronchus, and (4) cardiac orifice of the stomach[3]. Flat objects as coins have their flat surfaces in anteroposterior positions, corresponding to the greatest diameter of the esophagus. Metallic foreign bodies usually require no contrast media for demonstration. Stoppage of a bolus of food may be the first sign of a stricture from malignancy. Barium in water or milk will show a ragged outline of the upper rather square surface of food bolus or will trickle around its edges, showing its true nature. Small sharp bones may be shown in a soft tissue x-ray, but in the neck are difficult to distinguish from calcification in the thyroid cartilage. Here barium soaked cotton balls will show fibers of the cotton hung on the protruding part of the bone.[1] Also small barium filled capsules will do a somersault when they strike the bony foreign body.

EXTRINSIC LESIONS

To understand the diagnostic significance of a change in the position or outline of the esophagus caused by diseases of adjacent structures, some knowledge of their relationship must be had. The esophagus begins at the level of the postero-superior border of the cricoid and ends 3 to 5 cm. below the diaphragm, at the cardiac orifice of the stomach. Thoughout its course it lies along the front of the vertebral column excepting in the upper posterior mediastinum above the level of the arches of the aorta and the azygos vein where "the pleural borders are close together, posterior to the esophagus"[9], and where the esophagus crosses the aorta in passing through the diaphragm.

Anterior to the esophagus in the cervical region are the larnyx, trachea, and left lobe of the thyroid. Anterior to the esophagus in the thoracic region are the trachea, with the arch of the aorta in front and to the left, the left main bronchus, and the pericardium. In the abdominal region the liver is anterior to the esophagus[3].

Traction diverticulae may occur at any point in the esophagus, usually posterolaterally in its mid-portion, and result from inclusion of the wall in healing of adjacent disease. These diverticulae are tent or cone-like projections from the esophageal wall, causing no symptoms and are incidental findings; they may simulate ulcer, but there is no evidence of spasm or irritational symptoms.

Retropharangeal and retro-esophageal abscesses will narrow the lumen of the upper esophagus; these can be shown by soft tissue

radiographs or by any of the media the patient can swallow. Gas present in the swelling usually indicates foreign body puncture as the cause of abscess[11].

Aortic aneurysm in the ascending aorta displaces the esophagus backward and to the left; aneurysm in the arch displaces the esophagus to the right (the barium filled esophagus gives the most accurate delineation of the right border of the aortic arch in any circumstance); and aneurysm in the descending aorta displaces the esophagus to the right and backward.

Cardiac Pathologic Changes.—As the esophagus is in close contact with the posterior surface of the pericardium, its displacement is constant in various changes in the size of the heart due to any disease. In cardiac enlargement due to dilatation or hypertrophy, the esophagus is always displaced backward —it may be either to right or left; in pericardial effusion its position is almost unchanged[2]. For more detailed description, the reader is referred to an article in the February, 1935, number of *Radiology*, by Samuel Brown and Justin E. McCarthy.

Various mediastinal tumors cause displacements, and their preponderance on one side can be demonstrated by the changed position of the esophagus. Hernia through the mediastinum will show the esophagus to the left and anterior, as most of these hernias are above the arch of the aorta and are from right to left. Any medium may be used.

Spinal deformities change the relationship of the vertebrae to the esophagus and may cause displacements.

Diaphragmatic hernia may, especially in elderly people, protrude through the esophageal opening. With the patient upright, a persistent gas bubble in the lower end of the esophagus and/or narrowing of the lumen with displacement forward or to the right should arouse suspicion of hernia. With the patient supine or in the Trendelenburg position, a part of the fundus of the stomach is seen along side of the esophagus. This must be differentiated from the short esophagus with thoracic stomach, but the cardia can usually be identified in the short esophagus as being above the diaphragm. Any medium may be used but I prefer milk or thin acacia mixture for better suspension and more fluidity.

SUMMARY

Diseases of the esophagus are outlined with the characteristic x-ray findings given.

Various types of x-ray opaque media are suggested, with those most applicable for special examination recommended.

Displacements of the esophagus from extrinsic adjacent organic disease are discussed.

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1221 Medical Arts Building.

ASPIRIN POISONING

"Recently an editorial on the toxicity of acetylsalicylic acid (aspirin) appeared in these columns," *The Journal of the American Medical Association* for Jan. 11 says. "Since that time several communications have been received commending *The Journal* for publishing the editorial. One correspondent asserted that he knew of two instances in which only prompt medical attendance saved the lives of two colleagues who had ingested the drug. He also was aware of a prominent dermatologist (a specialist in skin diseases) who developed such intense pharyngeal (pharynx) and laryngeal (larynx) edema (swelling) after taking aspirin that a tracheotomy (formation of an artificial opening into the windpipe) was about to be performed when the edema began to subside. Again, an allergist had informed him of at least five deaths attributed to acetylsalicylic acid. Another correspondent wrote of a patient who had taken 250 grains (16 grams) of acetylsalicylic acid daily for a period of ten days. The patient recovered following treatment directed chiefly toward elimination of the drug, control of acidosis and relief of other symptoms. There must be many more cases of drug intoxication or poisoning than are reported in medical literature. Often only by accident are these brought to the attention of the medical profession. Obviously case reports of such conditions affecting human beings are an invaluable contribution to our practical knowledge of toxicology (what is known regarding poisons). On the other hand, the toxicity (poisonous qualities) of aspirin, in relation to the amount used annually, still must be rated as low."

The minute quantities of metal that might come off a knife blade and be incorporated in food are negligible and not injurious to the health, *Hygeia, The Health Magazine* declares in answer to an inquiry.

FRACTURE OF THE FEMUR*

S. A. COLLOM, JR., M. D., F. A. C. S.
TEXARKANA, TEXAS

There are many methods of treating fractures of the femur, and good results are obtained by most of the methods used; however, there are methods used for various types and locations of fractures of the femur which yield the best results. I shall not mention many methods of treatment which deserve due consideration, but I wish to emphasize a few simple methods that have proven quite satisfactory with me.

Anatomy. The femur possesses a head, a neck, a greater trochanter, lesser trochanter, a shaft with its lateral and anterior bowing, and the lateral and medial condyles. The head fits in the acetabulum, forming one of the strongest joints in the body, in spite of its wide range of motion. The head is covered with cartilage proximally. The neck slopes upward with an obtuse angle of about 125 degrees and there is an anterior inclination of about 12 degrees.

The femoral shaft occupies a deep situation in the thigh and is surrounded by heavy muscles. The condyles form the joint surface for the knee with the tibia.

The ligamentum teres attaches to the acetabulum and the central portion of the head of the femur through which is carried a small blood supply.

The Y ligament of Bigelow arises from the anterior inferior spine of the ilium and the upper margin of the acetabulum to insert on the intertrochanteric line of the femur. This ligament is quite strong and carries a good blood supply. The posterior portion inserts higher on the neck than the anterior portion.

The muscles which play an important part in fractures are: the extensor group—rectus femoris; vastus lateralis; vastus medialis, and the vastus intermedialis; the adductor group—gracilis, adductor longus, adductor magnus and the adductor brevis; the extensors—biceps, semitendinosus and semimembranosus. The remaining muscles of importance here are the iliopsoas, inserted into the lesser trochanter, which may cause flexion of the upper fragment, and the group of short external rotators which tend to rotate the proximal fragment outward. The tensor fascia femoris passes obliquely downward and posteriorly from the anterior superior iliac spine, and the gluteus maximums comes obliquely forward from the posterior portion of the ilium to insert on the iliotibial band of the fascia lata. These help to hold the head in the acetabulum.

*Read before the Section on Surgery, State Medical Association of Texas, Dallas, May 14, 1940.

The bony landmarks of importance are: the anterior superior spine of the ilium, the symphysis pubis, the crest of the ilium, the tuberosity of the ischium, the greater trochanter, the condyles, and the patellar. Nelaton's line is that line drawn between the anterior superior spine of the ilium and the tuberosity of the ischium, bisecting the greater trochanter.

The femoral artery lies well protected in Hunter's canal.

The center of the head appears in the first or second year and usually unites the eighteenth or nineteenth year.

Epiphyseal cartilage separation usually occurs between the ninth and fourteenth year. The treatment of this is not discussed here.

Intertrochanteric fractures are divided by A. W. Raggio of the Massachusetts General Hospital, into:

"1. Incomplete without deformity.
2. Hinge fracture with deformity.
3. Hinge fracture with separation of the lesser trochanter.
4. Subtrochanteric and intertrochanteric regions.
5. Same, with separation of the lesser trochanter."

The treatment consists of:

1. Skeletal or skin traction for eight weeks, and then walking caliper or crutches. From 15 to 25 pounds pull is generally required. Russell traction or Thomas splint with Pierson attachment is used.

2. Open reduction with plating. After eight weeks, walking caliper or crutches is used.

3. Plaster spica cast for from eight to ten weeks. Whitman method with abduction of legs and 20 degrees internal rotation of feet. The cast should extend well over the abdomen and to the toes of the affected side and down to the knee of the unaffected side.

4. Roger Anderson Splint. This is a very excellent method when it is necessary to get the patient out of bed soon; it is best applied to the aged. The well leg is used for traction and both legs are placed in casts. The great disadvantage is the appearance of pressure sores with its use. The hip is not immobilized, but the indications of traction and counter traction are satisfied.

The important factor to remember is that most intertrochanteric fractures heal because of good blood supply. The treatment often depends upon the economic condition of the patient.

Fractures of the neck of the femur are classified by Wilson, as follows:

"1. Subcapital.
2. Transcervical.
3. Basal."

The blood supply is of great importance.

Aseptic necrosis of the head may occur, as described by Phemister.

The diagnosis often is made by eversion of the foot, pain in the region of the hip, the greater trochanter is above Nelaton's line, and finally by x-ray.

The treatment is first reduction by slow traction, in which Russell traction is an aid, or by manipulation. Whitman and Ledbetter methods are good, but I have used that described by Dr. Smith Petersen, which is traction in flexion followed by internal rotation, abduction and extension. The operator stands on a stool by the operating table, and the arm of the operator near the patient is flexed under the knee of the flexed leg of the patient and the opposite hand is placed on the ilium with thumb up. By extension of the operator's spine, traction is made on the femur with counter traction of the opposite hand against the ilium. The femur is rotated, internally abducted and extended in rapid succession. I prefer Russell traction where there is no impaction of the fracture because it is a slow non-traumatic reduction; the time required allows the patient to recover from shock as well as permitting a comfortable fixation, and time is available to study the physical condition of the patient before the ultimate fixation.

Russell traction with adhesive or pin through the distal end of tibia. The adhesive traction by the method of Russell can become objectionable because of blisters forming under the adhesive plaster and slipping of traction. A pin through the distal end of the tibia is better, as done by Caldwell of New Orleans. Russell traction is quite comfortable and very effective in the reduction of non-impacted fractures. As the continuous treatment, it is objectionable because of long hospitalization; however, it affords mobility of the body in bed, and motion of the joints.

Russell traction requires very little equipment. This consists of a bed; one wide board for the bed; two pillows; rope; Balkam frame; one spreader, and mole skin adhesive. The hip is flexed 20 degrees, and the leg is abducted not over 20 degrees; there is 20 degrees flexion of the knee. The head is lowered eight inches. A swath is placed under the knee with a rope to an overhead pulley. The rope threads through a pulley at the foot of the bed, then through a pulley at the end of the spreader and is continued down over another pulley at the foot of the bed, ending with a weight of 6 to 12 pounds for adults, 3 to 4 pounds for children. Russell traction for complete treatment requires about 100 days.

The Whitman cast may be applied and left for from twelve to fourteen weeks, then a walking caliper for from four to six weeks.

The operative method of internal fixation probably gives the greater percentage of cures, reported to be between 75 per cent and 90 per cent effective. Other methods have been reported to give not over 60 per cent good results. There are a number of methods used for internal fixation, among which are the Smith Petersen open fixation with the Smith Petersen nail, the blind fixation with Moore nails, and the ordinary wood screws as used by Dr. Brewster of New Orleans. Dr. Brewster uses the metal number 10 screws, three and one-half inches long, and he places two screws through the neck by first drilling a hole in the proper direction with a three-sixteenth inch drill, checked by x-ray. He reports very good results.

There are doubtless other fixation materials used, but I shall demonstrate by motion picture, the Engel-May blind method in which a Smith Petersen vitallium nail is used with a hole down the middle to carry a Kirschner wire. The patient has had a fracture of the neck of the femur reduced by the use of Russell traction over a period of one week. During this time, a study was made of her physical condition, and she recovered from shock. She had begun to eat well. A board was placed under her body and legs, the Russell traction was released, and the patient was lifted on the board to a stretcher and then to the operating table. The affected leg was abducted 20 degrees, the knee was flexed and the foot anchored to a stool with internal rotation of 15 degrees. Local anaesthesia was used after giving the patient one-fourth grain of morphine and one-one hundredth and fiftieth grain of scopolamine. An incision was made two and one-half inches long, extending from the greater trochanter down the shaft of the femur. After severing the fascia, the greater trochanter was located, and the pie-shaped Engel-May direction finder was placed parallel with the shaft of the femur and about 10 degrees posterior angulation. This was held in place by a small nail, and a cap was placed to prevent rotation. An anteroposterior x-ray film was made, and from this plate the correct angle of the neck of the femur was obtained. Another nail was driven into the shaft of the femur through the groove which pointed most directly to the line of the neck of the femur.

From this film was also calculated the proper nail length to be used. This was done by measuring on the roentgenogram the distance from the outer cortex of the shaft of the femur to the proximal part of the head, and subtracting one-half inch for impaction.

This measurement is to the actual length on the patient, which is termed (X), as the length of the finder of the x-ray film is to nine centimeters. Nine centimeters is the actual length of the direction finder from its base to its vertex. The finder is then rotated on the second nail threaded through its central opening after the first nail has been removed. The rotation is to a 90 degree position with the shaft of the femur. A lateral film was made, which gave the corrected direction from the lateral view. This was determined, and a Kirschner wire was drilled to the head. This Kirschner wire was drilled to a distance which was the sum of the length of the nail and the length of the finder. This should place the wire in the head one-half inch distal to the proximal border of the head. The finder was removed and a Smith Petersen vitallium nail was driven over the wire, threading the wire through its center. The nail was driven home and the wire was removed. The fracture was then impacted by an impactor, the wound was irrigated with saline, and then closed. The patient was in a wheel chair within one week and allowed to walk at six months after union was shown by a roentgenogram. The nail should not be removed unless necessary and this is best not to do for one year.

Fracture of the Shaft of the Femur. The method of treatment of children under 6 years of age is overhead suspension with skin traction, using from 5 to 20 pounds for from six to eight weeks. The method of treatment in children over 6 years of age is the use of a Thomas splint with skeletal or skin traction for from six to eight weeks and plaster of Paris cast applied earlier if needed.

A Thomas splint with Pierson attachment is best used in fracture of the middle and upper thirds of the thigh. Skin or skeletal traction can be used. I have found patients to be more comfortable with the use of the Kirschner wire. Skin traction of from 5 to 40 pounds pull is used, and skeletal traction of from 15 to 40 pounds. Over-pull should be avoided to prevent nonunion.

Fractures of the lower third of the shaft should be treated with a Kirschner wire just below the knee to prevent anterior displacement of the distal fragment. After union has been established, a plaster of Paris cast can be used.

Open reduction can be secured by the use of Sherman's bone plate, Parham band, suture material, bone graft or no internal fixation. If internal fixation is used, it should be done in from seven to ten days after the fracture.

The knee joint motion is quite important in the treatment of the fractured femur, and this should be saved or restored as early as possible.

SUMMARY

The gross anatomy of the femur with its allied structures is reviewed. Fractures of the neck, intertrochanteric and shaft fractures are classified. Russell traction is described. Skeletal traction for the fractures of the upper third, middle third and lower third is discussed. Skin traction is described and Whitman's cast is described. The Engel-May blind method of nailing a fracture of the neck of the femur is discussed in detail, with a motion picture showing the operation.

RECENT PROGRESS IN ANESTHESIA*

E. A. ROVENSTINE
NEW YORK, N. Y.

There is little fear of contradiction if, in discussing recent advances of any specialty in the practice of medicine, it is stated that the last decade has been a period of unusually rapid progress. Phenomenal developments in diagnosis, therapy and the fundamental concepts of the healthy and diseased human organism are being reported with astonishing frequency from all branches of the medical sciences. It follows regularly that progress in one field of medicine is reflected in all others. Anesthesia is no exception to this established rule. However, the statement that anesthesia has made rapid progress in the last decade should be given more significance. It might well be said that anesthesia today owes the superiority which it has over the practice during the initial eighty anesthesia years, to developments that have materialized within little more than the last decade. It will not be denied that improvements in medicine are rarely spontaneous and that progress follows long periods of preparation, accumulation of facts and experiences and correlation of results. However, important progress is not represented exclusively by new discoveries or improvements. The stimulus that impels investigators to create may be more significant. This is undoubtedly true of anesthesia and the recently acquired incentives for progressive development is its most important advancement.

NEW CONCEPTS OF ANESTHESIA

It must be admitted that the impetus for improvements in anesthesia did not come to any great extent from within the specialty. It has developed largely from the insistence of surgery, its patron, that indispensable auxiliary services be brought in proper align-

*From the Division of Surgery, Department of Anesthesia, New York University College of Medicine, New York, N. Y.
*Read before the Section on Surgery, State Medical Association of Texas, Dallas, May 15, 1940.

ments with its own rapid strides. Anesthesia has been forced to create a new order for its practices consistent with the newer concept of surgical therapy. When surgery was content to confine its practices to little more than the removal of diseased tissues and the correction of deformed structures, anesthesia was required to do no more than present a patient insensible to pain and with skeletal muscles relaxed. The new era of surgical therapy with its keen appreciation of the relations of biochemical, physiological and psychological disturbances to disease, and its new objective the restoration of the functions of the organism as a whole, demands much more. It requires a return to the truly scientific tradition of medicine wherein each surgical patient is protected with a high degree of judgment, knowledge and skill in the preoperative preparation, in the choice of anesthetic agent and method, in their expert administration and in the prophylaxis and treatment of postoperative complications. Added to this requirement are those imposed with the extension of surgical therapy to every region of the body. Surgery now invades the cranial or the thoracic cavity with almost the same confidence that surrounded opening the abdomen a few years past. Such manipulations cannot be completed satisfactorily with the anesthesia that was practiced during the earlier years of the present century.

A more intense interest in anesthesia and an added stimulus for investigation has followed the realization that many fundamental researches in the laboratory sciences established conclusions that have been carried into clinical practice after experiments upon animals during anesthesia. Many such experiments gave too little consideration to the effects of the anesthetic drugs employed, and not a few of the deductions now need to be reviewed after determining the abnormal conditions caused by anesthesia.

The field of usefulness for anesthesia has been widened and new interests created by advances in other practices. The more liberal use of inhalation therapy, the increased demand for therapeutic and diagnostic nerve blocking, the more frequent opportunities for the practice of resuscitation have added new responsibilities to the specialty. Such practices have served also to divorce anesthesia from a definite single appointment as an accessory to surgical therapy and make its efforts useful in other fields of practice, such as internal medicine, neurology, and so forth.

NEW ANESTHETIC DRUGS AND METHODS

Anesthesia is not without new discoveries and inventions during the last few years to substantiate its claim to progress. An imposing list of new anesthetic drugs, appliances and methods have recently been added or brought nearer perfection. Among the newer drugs introduced into practice that have a basis of merit from clinical trial and laboratory study are a gas, a volatile agent, and several non-volatile drugs. The gas, cyclopropane, has attracted widespread attention, first, because of its greater potency than other gaseous agents, second, because of its non-irritating rapid action. Cyclopropane has been acclaimed as advantageous for certain patients, particularly those with respiratory infections. Like other new drugs it has been enthusiastically adopted in some clinics and severely criticized in others. The use of cyclopropane is steadily increasing and much of the knowledge necessary to understand its action and proper use is being rapidly accumulated. It cannot be said to have passed through the experimental stage and there will undoubtedly be many disappointments with it for years to come, just as there are with other agents in use for many years. However, to the credit of cyclopropane are definite advantages for certain patients and it seems destined to gain an undisputed place in modern surgery.

Vinethene is the new representative of the volatile agents. Promising results have been reported from its use in obstetrics, dental surgery, superficial operations and those that may be completed within a short time. Vinethene has neither been investigated in the laboratory so extensively as cyclopropane nor has it been given the clinical trial. It is unlikely that it will have a wide application or be found eventually to be superior for many individuals to other agents already in use.

Among the recent additions of non-volatile drugs none have created more interest than the derivatives of barbituric acid. These products are so numerous and many of them have been recommended and employed without sufficient, reliable investigation of their pharmacological action that considerable confusion exists in determining their exact therapeutic application. The proper use of the shorter acting representatives of the barbiturates for intravenous anesthesia is still to be determined. Clinical reports are optimistic but not without definite warning. Certain limitations, such as their dangers when given to children, are being established. Before they may be assigned a proper place in the anesthetic armamentarium more experience and further investigation is required. It is not assured that intravenous anesthesia with barbiturates will replace the more orthodox inhalation methods for extensive surgery.

Other non-volatile drugs include several

new agents for local or regional anesthesia. The interest in metycaine, nupercaine and pontacaine has been revived with a better selection of concentrations and safer technical application. Intracaine, resembling procaine, has been found to be of value because of the rapid onset of action when used in local or regional anesthesia and when given in small doses subdurally. A satisfactory sensory effect may be often obtained with little disturbance of motor function.

Many ingenious mechanical devices have been recently perfected for improving the technical application of agents and several new methods have been advanced. It is without the scope of this discussion to describe either in detail. Of considerable interest is the recent widespread increase in the use of the carbon dioxide absorption technic for inhalation anesthesia. This method has been in use for more than twenty years but unlike most merited innovations, its adoption has spread during the last few years chiefly from direct or indirect contact with Dr. R. M. Waters, the originator. The most important advance offered by the carbon dioxide absorption method is the control of the anesthetic agent, of oxygen and carbon dioxide by the anesthetist. The maintenance of adequate respiratory function is definitely placed in the hands of the anesthetist. With it the administration of inhalation anesthesia may be conducted upon a physiological basis.

Another technical improvement of considerable interest is the widespread use of endotracheal airways. Various types of hollow tubes have been prepared which may be placed translaryngeally into the trachea and provide unobstructed respiratory exchange of oxygen, carbon dioxide and anesthetic gases or vapors. With such airways, several surgical procedures that provided many difficulties for the anesthetist are now accomplished with convenience to the surgeon and with an added safety to the patient. For example, operation within the thoracic cavity, the oral cavity, and upper abdomen are often more conveniently and safely accomplished with an endotracheal airway in place.

Methods for regional anesthesia, including subarachnoid block were new at the beginning of the present century. Since then, there has been a wave of enthusiasm with alternating oscillations of exaltation and depression until within the past few years when a more rational level of applicability has been reached. Regional anesthesia is a method with considerable promise since it aims to affect only a limited portion of the body with little influence on vital organs. Its development has not kept pace with developments in other practices.

Spinal anesthesia has been widely used because its technic is comparatively simple and it offers the primary desideratum for abdominal surgery, the completely relaxed abdomen and its contents. It appeals to the temperament of many surgeons and captivates those who are most interested in successfully attaining the objective of the operation. Efforts to eliminate spinal anesthesia sequelae which not rarely complicate, prolong or prevent recovery of the patient, have not been altogether successful. To date, there is no absolute proof of the intrinsic superiority of spinal anesthesia to other methods and its usefulness is proportionate to its individualized choice for patients rather than operative procedures.

Considerable significance should be attached to the recent progress in the preparation for patients for anesthesia. In the past, emphasis has been placed upon making anesthesia safe for the patient and too little attention given to making patients safe for anesthesia. Now it is being widely appreciated that no agent or method for anesthesia offers security for the patient not properly prepared. It is realized that surgical patients are no longer satisfactorily grouped as clinical entities or types of diseases but that each is an individual requiring particular safeguards and preparation with the viewpoint not alone of the existing pathology, but of the patient as a whole. The routine use of any drugs or other means for preparing surgical patients is no longer accepted practice. Preanesthetic preparation is being rigidly individualized for the patient with the same deliberation that enters into the choice of anesthetic agents.

CHANGING STATUS OF ANESTHESIA

No discussion of the recent progress of anesthesia would be complete without reference to the changed status of the specialty from the standpoint of organization, hospital standardization and qualifications of the personnel. Within the last five years many changes have been inaugurated by different medical organizations as well as those representing the specialty, these changes being expected to improve the scientific, educational, professional and administrative standards of anesthesiology. It has been realized for a long time that one man cannot possibly know all about any one part of medicine, to say nothing of its entirety. But those who profess to know much about any specialty should have definite standards of proficiency. The most important development in this direction has been the establishment of a certifying board. The American Board of Anesthesiology has been organized with the

combined efforts of the American Society of Anesthetists, the Section on Surgery of the American Medical Association and the American Board of Surgery. The latter is its particular sponsor and guides its activities by maintaining it as an affiliate. Close cooperation and able assistance from the Council on Medical Education and Hospitals of the American Medical Association, the American College of Surgeons, and the American Hospital Association have aided the board in its efforts on behalf of the specialty. The status of the anesthetist has been improved by establishing standards of professional qualifications to conform with the requirements of the Advisory Board of Medical Specialties. Standardized training for the anesthetist has been defined by the Council on Medical Education in the recently revised Essentials of Approved Residencies. The principles of relationship between anesthetists and hospitals have been prepared by a committee of the American Hospital Association and approved by other societies interested in organization of the hospital medical personnel.

It will not be questioned that the interest and activities of organizations in behalf of the specialty will have a profound influence in improving clinical anesthesia. It must follow that when comparatively large numbers of physicians after an internship, have devoted three years to special training and three years of additional practice to anesthesiology their efforts to improve their service will reflect to the benefit of medical practice, to the specialty, the hospital and its patients. The rapid progress in aligning anesthesia with approved medical education and establishing it in hospitals is becoming evident in the trend to give the subject a more definite place in the undergraduate curriculum and in hospital postgraduate teaching. Medical schools in increasing numbers are making an effort to supply their graduates with some practical knowledge of respiratory and circulatory physiology and some of the knowledge and judgment that an anesthetist must have. Large numbers of hospitals are reorganizing and improving their interne training in anesthesia and not a few are establishing postgraduate training of one to three years in the specialty.

Considerable skepticism has been voiced by numerous members of the profession and many hospital administrators as to the ultimate outcome of this formidable program for improving anesthesia service to the patient. It is rarely argued that clinical efficiency in anesthesia is achieved or that improvements are not urgently needed. Doubt has been cast upon the ability of the profession to carry out its obligation to improve the practice because of existing economical complications. Such skepticism may not be taken too seriously since the spirit of hospital service has always evolved from the primary consideration, the quality of the service for the patient. Hospitals do not carry on for long any therapeutic activity that is dominated by profit at the expense of service. Moreover, recent statistical facts point definitely toward the success of the various organizations in their efforts to improve anesthesia. More than 90 per cent of the registered hospitals of the country reporting to the American Medical Association, in 1939, stated that nearly 15 per cent of the anesthetists in their institutions were physicians devoting their entire time to anesthesia, and that more than 60 per cent were doctors of medicine. There are more than 700 physicians listed as specializing in anesthesia and the membership in anesthesia societies more than doubles this number. Thirty-four hospitals have been approved for residencies and fellowships in anesthesia which provide for the training of more than 100 graduates in medicine. Almost half of the class A medical schools include on their faculty physicians devoting their entire time to anesthesia and more than one-fifth of these institutions have as a full time faculty member a specialist in anesthesia. Finally, it has not been shown that placing qualified physician anesthetists in hospitals or medical schools has imposed a formidable financial burden. In fact, it has followed frequently that a more favorable financial situation has come about.

NEEDS OF ANESTHESIA

It would seem illogical to conclude this discourse without pointing out some needs of anesthesia wherein progress has not been particularly significant. No specialty will long deserve the distinction or will keep pace with the practice of medicine unless its position is established on a scientific basis by laboratory and clinical research. Those who practice it must also have a certain kind of developed skill. In addition, it must have the respect of other members of the medical profession and finally it must appeal to the public. Anesthesiology would seem from the foregoing recital of progress to be well on its way to satisfy the scientific requirements. It has attracted many physicians who are devoting the time necessary to become proficient in the art of the practice and its status in the profession is steadily improving.

The final requirement for establishing a specialty, and not the least important one, an appeal to the public, has made little progress. Public opinion is far from favoring

anesthesia as a specialty in the practice of medicine and for the most part, doctors can be included as members of this public. To the great majority of those requiring the benefits of anesthesia the whole procedure is regarded as simply giving a dose of medicine. The public's knowledge of any therapeutic medium and the formation of their opinion depends upon the words of their medical adviser and such printed information as may be available. Today the doctor discussing anesthesia with his public will more often speak in praise of one or another of the drugs used or of some technic. This attitude is sharply in contrast to that taken in recommending the services of any other specialist. In the latter instance, the training and ability of the individual are given foremost consideration. Few of us would not make an important point of distinction between the midwife and obstetrician even though they used the same drugs. The analogy is not absurd. We realize full well that training, experience and judgment of the obstetrician are the important factors in safeguarding the lives of mother and baby during childbirth. And to carry the analogy further, it would detract little from the arguments in favor of the obstetrician to cite a long series of deliveries by the midwife without deaths or serious complications. We know that a large percentage of births can be satisfactorily completed without the services of a physician and certainly without a specialist. Proficient anesthesia may likewise be accomplished in the majority of cases without the aid of a specialist, or one with a medical degree. The chances greatly favor the completion of uncomplicated childbirth or uncomplicated anesthesia, regardless of who may officiate. The human body quickly organizes its functional activities to meet emergencies and to withstand excessive burdens placed upon it. However, it will not be denied that progress in the practice of obstetrics would have been greatly retarded without the trained obstetrician. The specialty of obstetrics would not be established as it is today without the favorable public opinion fostered by doctors, hospitals and the press arguing for the benefits that medical training, skill and judgment conferred during childbirth. Anesthesia is being retarded today because the public does not know the benefits that medical training may offer to safeguard them during surgical anesthesia.

The specialty of anesthesia is benefited little by a news article describing the merits of a new drug or appliance. Too often the public concludes from such reports that the drug is the most important factor, that its administration is no more complicated than giving an enema or a hypodermic, or that a machine is constructed so well that it automatically eliminates serious complications. Rarely is the public told by the press and not frequently by their medical advisers that the services of a physician or a specialist are a safeguard in the successful completion of anesthesia. Anesthesia needs to be so aided much more than it needs a new anesthetic agent or a new gas machine. It needs to influence public opinion in favor of the specialty not in the interests of those of us who practice it but in the interests of progress. The era of clinical efficiency in anesthesia despite recent advances, is yet to dawn. The rapid strides of medical practice have long since taught us that it is a sad error to think any of our practices sufficient. Few of us have the gift of prophecy so developed that we would not hesitate to predict the anesthesia a few years hence. The present-day trends in surgery indicate requirements that will demand from the anesthetist of the future skill, technics and imagination far beyond our present capacity.

These latter remarks are a digression from the original theme. They are interjected here to point out that the future progress of anesthesia seems to be intimately dependent upon its appeal to the public; an appeal that cannot be made by the anesthetist alone. There are none of us who do not have great pride in recalling that anesthesia, without which modern surgery would not be possible, is an American contribution. We should consider it an obligation and a privilege to advance its status, and to keep it in the position of leadership established in 1846.

477 First Avenue.

DELAYED POISONING FROM EMBEDDED BULLET

The possibility of delayed lead poisoning from embedded bullets should be considered in making a decision as to the removal of the bullets, Willard Machle, M. D., Cincinnati, declares in *The Journal of the American Medical Association* for Nov. 2. He reports two such cases.

Although some physicians believe that bullets remaining in tissues cannot give rise to lead poisoning, Dr. Machle maintains that this unquestionably does occur, although rarely. The cases, he reports, show lead absorption comparable to that found in occupational lead poisoning.

"With the present means for determining the magnitude of lead absorption," he says, "uncertainty need no longer exist. If significant amounts of lead are being absorbed from a projectile in the tissues, the fact may be established readily and the likelihood of intoxication (poisoning) estimated."

The symptoms of lead poisoning are severe colic, constipation, a bluish line on the gums, nerve injury, headache, dizziness and general weakness. To make a proper diagnosis, however, the amount of lead in the body tissues and fluids should be determined.

THE MANAGEMENT OF CALCULI IN THE LOWER URETER*

J. R. REAGAN, M. D.
WICHITA FALLS, TEXAS

In spite of the vast amount of experimental and clinical work being done on the cause and prevention of urinary calculi, no satisfactory means of preventing the formation or bringing about the dissolution of such concretions has been arrived at. As a result of this work, many theories have been evolved which no doubt explain the etiology of stone in a few isolated instances, but in the vast majority of cases, after a thorough search, we are as much in the dark as to etiology as we have been in previous years. It is hoped that no degree of discouragement results from the apparent lack of progress in the solution of this problem, for from this work it is to be hoped that the answer will some day appear. Until this solution arises, we must concern ourselves with the problem of the best method of management in such cases.

Ureteral calculus probably presents more problems in management than any other urological condition. There exists at the present time and probably will always exist, a wide divergence of opinion among urologists as to the course to be followed in the removal of ureteral calculi. A review of the literature will at once disclose the multiplicity of instruments designed for the removal of stones and the diversity of methods available for handling this problem. It is beyond the scope of this paper to enumerate or discuss these methods. The success attained by any method is apparently due to the degree of familiarity of the author with the instrument or method in question. I am thoroughly convinced that one must become well acquainted with any instrument in order to realize its fullest possibilities. Evidence of this statement is seen by the high percentage of stones removed by various observers who adhere to any certain method or instrument. Peacock reports 50 per cent removed transurethrally, Squires and Crowell 87 per cent, Dourmashkin 84.3 per cent, Walther 88.9 per cent, Ballenger and Elder 90 per cent, Ravich 85 per cent, Thompson and Kibler 91.4 per cent—all using different instruments and different methods.

Each case presents an individual problem and various observers differ radically in their opinion as to the best method of management. These opinions are advanced by men whose judgment is above question and who are of approximately equal skill. We should not allow ourselves to fall into the error of attempting to fit every case to a certain method, yet I am convinced that our results will be better if we have, and adhere rather closely to, a well planned course of procedure in these cases. We should be prepared to abandon this course at any time for more radical or conservative methods, as the case may be, for problems and complications may arise in the transurethral management of stones that will necessitate very sudden changes in treatment or will result in sudden and severe damage to the urinary system, or a fatal termination of the case as a result of urinary sepsis. Following the unsuccessful attempt to extract a calculus, we are immediately confronted with the problem of whether we shall adopt a conservative program of watchful waiting or take a more radical course and promptly remove the stone surgically. Here I am definitely of the opinion that we are not justified in delaying prompt surgical intervention, for the results of systemic infection from the urinary system come quickly and with little warning. If we delay too long, frequently the opportunity for successful and safe surgery will have been passed.

With the oft-repeated statements and warnings in literature and texts advanced by many urologists regarding the dangers of metallic extractors, I disagree entirely, as my experience and the experience of many urologists in large numbers of cases does not substantiate them. With those who advocate repeated dilatations and manipulative procedures I can not agree. This frequently results in an economic loss and physical suffering and disability equal to or greater than that resulting from surgical removal. Many of these patients come to fear the post-cystoscopic reactions following manipulative procedures more than operative removal and slip away from the urologist and find their way to the general surgeon who does not know so much about manipulations of ureteral calculi — but promptly and painlessly relieves the patient of his stone. This patient then becomes a walking condemnation for all urologic investigation.

The series of 122 cases considered in this article include ureteral calculi of all sizes, varying from millet seed size to 2 cm. in their greatest measurement. It should be pointed out that a large percentage of these stones would no doubt have passed spontaneously if a program of expectant treatment had been followed or would have passed without benefit of any form of treatment, but I find the vast majority of patients willing to take chances on a method offering a reasonable possibility of prompt removal of the stone rather than rely on repeated manip-

*Read before the Section on Surgery, State Medical Association of Texas, Dallas, May 15, 1940.

ulative procedures or await spontaneous passage. In these cases the Council extractor (Fig. 1-B) was employed in the removal of the larger calculi, while the Johnson extractor of similar design on a smaller scale was used in the case of small stones (Fig. 1-C.) Ureteral meatotomy was seldom necessary due to the fact that the meatus is readily dilated by the extractor. When meatotomy was necessary the diathermy scissor type shown

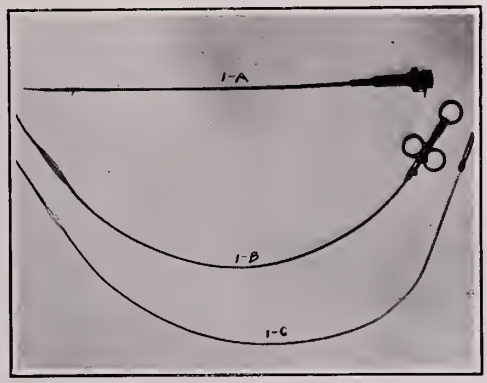

FIG. 1. (A) Diathermy ureteral meatotomy scissor. (B) Council stone extractor. (C) Johnson stone extractor.

in Figure 1-A was employed. This produces a clean, bloodless incision which heals without scarring. Of this group, 103 or 84.4 per cent were presented with their stone upon recovering from the anesthetic; in seven cases fragments were removed, but spicules of stones, visible in the roentgenogram remained which passed spontaneously without further treatment, five required ureterolithotomy, and four patients passed their stones within a period of a few weeks without further manipulation. In no case was an attempt at a second extraction made. Some observers attempt a second extraction after a period of a few days have elapsed, but I feel that the dilatation following this procedure is quite sufficient to allow the passage of the calculus in the majority of cases, very promptly after the edema has subsided, provided we are not forced into a ureterolithotomy in the meantime by some complication that may arise. So long as the patient remains comfortable and does not present symptoms of obstruction or systemic signs indicating severe infection, I am content to await the spontaneous passage of the calculus rather than attempt a second extraction during the stage of edema, which is present for several days following manipulation. The duration of symptoms, the number of attacks or the severity of the attacks was not considered in any of these cases.

There are certain conditions that may exist, which would certainly mitigate against or make transurethral manipulation of a calculus inadvisable or impossible, such as marked prostatic hypertrophy, pelvic tumors, advanced pregnancy, fixation of hip joints, urethral strictures, solitary kidney with complete obstruction, bilateral complete obstruction and severe infection above the stone causing grave danger from sepsis.

Many factors determine the success or failure in extracting ureteral calculi and definitely influence the complications that may arise following the procedure. The size of the calculus is probably the most significant factor according to most urologists, but on this point I am inclined to disagree, in some respects. Of far greater importance than the size of the stone is the caliber of the ureter. All of us have seen patients with stones that we did not believe could possibly pass spontaneously or be made to pass with the aid of the best methods available, yet have this same patient refuse operation and return some weeks or months later and present us with the stone and exhibit a normally functioning kidney and that readily recognized "I told you so," attitude. It is far more difficult to pass a catheter or extractor by a small stone in a relatively small ureter than it is to pass the same instrument by a large stone lodged in a ureter of large roomy caliber. As a matter of fact, I feel more certain of my ability to remove a large olive seed size stone from the lower ureter than I do in attempting to remove small stones from the same location. The extractor can usually be passed by these large stones with a minimum amount of difficulty and the withdrawal is usually accomplished with the greatest of ease. We may find that the extractor passes the stone with utmost ease, but for some reason we are unable to engage the stone as occurred in the case shown in Figure 3.

The extractor was repeatedly passed with the greatest of ease and at operation a widely dilated ureter was present which might account for my inability to engage the calculus. The extreme roominess of the ureter above the calculus may have been the factor that led to failure. The configuration of the calculus definitely influences the possibility of spontaneous passage, and possibly influences the chances of extraction. Smooth oval calculi are more likely to pass unaided, whereas the irregular jagged type are more readily extracted. Stenosed ureteral orifices, ureteroceles, congenitally narrowed ureters such as often found in pelvic and ureteral reduplication definitely increase the difficulty of extracting stones of any size.

Fully 75 per cent of all ureteral stones are found in the lower one-third of the ureter,

that portion most accessible to instrumentation. As a general rule we should allow the stone to reach the pelvic spindle before attempting extraction—but in a number of cases I have passed the extractor as high as the middle one-third without untoward effects. Thompson and Kibler in a recent article state that they have successfully extracted stones from the ureteropelvic juncture and from the renal pelvis. Many authors

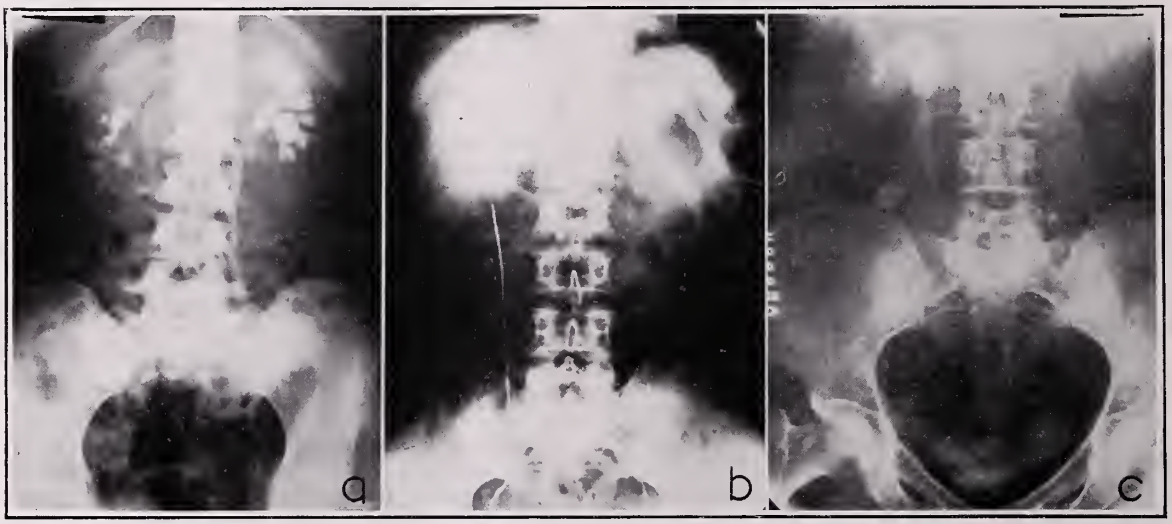

FIG. 2. Illustrative case: *a*. (Mrs. T. B. R.) Indwelling catheter for twenty-four hours. Duration of hospital stay, two days.
b. (Mrs. B. C.) Indwelling catheter twenty-four hours. Duration of hospital stay, three days.
c. Indwelling catheter twenty-four hours. Duration of hospital stay, two days.

maintain that a well performed lumbar ureterolithotomy is a comparatively minor procedure and is to be elected rather than allow or encourage a stone of any caliber to enter the pelvic ureter where a more serious surgical procedure may be necessary following an unsuccessful attempt at extraction. After a stone enters the ureteral spindle its passage to the lower portion is usually rapid and accompanied by a slight amount of pain. The last few centimeters of the ureter and especially the intramural portion are the most difficult points to be traversed in the course from the renal pelvis to the exterior. Stones in the intramural ureter should practically always be recovered by some transurethral procedure. Frequently a wide meatotomy will suffice.

Under no circumstances should extraction be considered as an office procedure. All patients are hospitalized and advised as to the possible complications and warned of the probable necessity of prompt surgical intervention in the event of an unsuccessful extraction. Every effort possible should be made toward gentleness during the manipulative procedure. Prolonged attempts at removal should not be permitted, and more than a few seconds should not be spent in attempting to engage the stone. Repeated passage of the extractor past the stone produces an undue amount of trauma predisposing to complications. Failing to extract the stone after three or four attempts, the extractor is removed and one or more ureteral catheters are passed to the renal pelvis, and allowed to remain in place for forty-eight hours. I employ the McCarthy panendoscope, using a number 24 F. caliber sheath. Instruments with complicated levers, elevators, or directors should not be used as the sense of resistance is somewhat distorted and an undue amount of force may be exerted. Thorough relaxation is most essential and the success or failure is highly dependent on complete relaxation. Avertin, spinal anesthesia, or sodium pentothal, are probably the anesthetic agents of choice. In all the cases under discussion, sodium pentothal or evipal was used. Morphine sulphate, one-fourth grain, was administered preoperatively. Under anesthesia the instrument can usually be passed by the stone with ease. When the stone is engaged in the wire cage, steady, gentle traction is made under direct vision. Here I wish to warn against undue traction, for this may result in serious damage to the ureteral wall. If undue difficulty is encountered in withdrawing the calculus —no cause for alarm should arise. No attempt should be made to disengage the stone but the extractor should be allowed to remain in place for twenty-four hours, at which time it can be removed with ease.

Following the removal of the stone, one or two ureteral catheters are passed to the renal

pelvis and left indwelling for twenty-four or forty-eight hours. A urethral catheter is left indwelling for the same length of time. The indwelling urethral catheter serves to prevent the regurgitation of urine alongside the ureteral catheters that may occur during the act of urination — leading to upper urinary infection. Constant and meticulous supervision should be given these indwelling catheters, to insure their continuous drainage. A catheter that will not drain is a definite detriment to smooth convalescence —it produces pain and predisposes to infection. The services of a nurse in constant attendance is urged; failing in this, the patient is instructed to observe the catheter from time to time and to notify someone in attendance at once, if the catheter becomes

FIG. 3. (Mrs. F. K.) Roentgenogram of case in which there was failure in extraction, possibly due to a widely dilated ureter above the calculus. It was removed by ureterolithotomy.

plugged. Every effort is made to re-establish drainage with a Luer syringe. Injections of any type solution are used only as a last resort, as each injection increases the danger of infection. Frequently if the patient is made comfortable and a period of one hour or longer is allowed to lapse, one will be rewarded by a free and copious drainage of urine without irrigation. The patient is instructed to take large quantities of fluids and if nausea is present, intravenous saline or 5 per cent glucose is given until fluids are tolerated. Sulfanilamide or mandelic acid is given in large doses. Hot wet fomentations and hot colonic irrigations are given. The catheter is removed at the end of twenty-four hours in case the stone was of a large caliber and was extracted with a minimum amount of difficulty. In the case of small stones or stones removed with some difficulty the catheter is allowed to remain in for forty-eight hours. The patient is allowed to leave the hospital at the end of twelve hours if comfortable.

In this series of 122 cases four reactions that would be considered severe were encountered. Febrile reactions caused most concern. In these cases, a temperature of

FIG. 4. (Case of J. L. B.) It was not possible to remove stone dislodger and stone until the following morning after initial effort at extraction. Two weeks later the patient expelled the remaining renal stones spontaneously, without colic.

from 103° to 105° F. developed, causing considerable concern as to the possibility of renal infection, periureteritis or thrombophlebitis. In three of the cases the fever subsided at the end of three, four, or seven days, respectively. In the fourth case a prolonged septic reaction was weathered by the patient. This was one of the early cases in which prompt surgical intervention was not instituted and after a few days waiting the patient's condition would not warrant surgery so a most severe and prolonged illness was weathered without aid. I am sure that this patient had a severe periureteritis, pelvic cellulitis and pyelonephritis. If a prompt ureterolithotomy had been performed in this case this complication could have been avoided. In approximately 50 per cent of the cases, temperature elevations of one or two degrees may be noted for the first forty-eight hours. Pain of any consequence

seldom develops following the manipulation or removal of a calculus. Usually by the time the patient has recovered from the anesthetic the initial pain of extraction has passed and the patient remains comparatively free from pain so long as the indwelling catheter drains freely. Only in a few cases was a postoperative opiate necessary for pain. Hot fomentations add much to the comfort during the first few hours. In no case was a catheter reinserted for drainage. The most severe reactions have always followed the removal of stones of small caliber. In no case have I seen a severe reaction follow the extraction of a stone of large caliber. I am sure that the explanation of this is the fact that the ureter is well dilated throughout its entirety by passage of large stones, thus providing free drainage. Some of the most severe reactions that I have ever encountered have occurred following the passage of a ureteral catheter of 6 or 7 caliber, so these reactions can not necessarily be blamed entirely to the passage of a stone extractor. A properly placed, well draining and carefully attended indwelling catheter is the surest means of preventing pain and febrile reactions.

The occurrence of traumatic strictures and damaged renal function have been the chief objection to the transurethral removal of ureteral calculi. Cystoscopies have been done routinely on all of these patients at the end of two to three months, and I have always found it very easy to pass a catheter of number 10 F. caliber to the renal pelvis. During the first few days a few cc. of residual urine may be present but always diminishes rapidly and in no case have I found residual urine at the end of the second week following extraction. The same careful postoperative attention to the ureter should be given in these cases as if the calculus had been removed surgically. The patency of the ureter should be checked and renal lavage should be carried out weekly until cultures from the renal pelvis are negative. The promptness with which the kidney returns to normal function will depend on the length of time the calculus has been present and the degree of hydronephrosis. If excretory pyelograms are made soon after the removal of a calculus the involved side may fail entirely to be outlined or be outlined only after thirty or forty-five minutes, but if an excretory urogram is made within a few weeks we will find a normally functioning kidney. This should not lead us to erroneously remove a kidney. It should be called to our attention again that renal function is temporarily diminished or entirely suppressed in many cases of ureteral calculus where the stone has been tightly impacted for a few days. This kidney will invariably recover completely, and promptly, following the removal of the calculus — whether this removal be surgically or by transurethral methods—providing adequate drainage is obtained by whatever method necessary.

CONCLUSION

1. Transurethral removal of calculi lodged in the lower ureter by metallic extractors is a safe procedure and should result in the removal of from 85 per cent to 90 per cent of such stones.

2. Extreme gentleness, thorough relaxation, and careful postoperative care are factors of greatest importance.

3. Traumatic ureteral strictures do not result from this procedure, and the return of normal renal function is prompt.

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1300 Eighth.

ABSTRACT OF DISCUSSION

Dr. Edward White, Dallas: The problem of stone in the upper ureter is entirely different in my opinion from that under discussion, *i. e.*, stone in the lower ureter. A stone that has run the gauntlet of the anatomical narrows at the uretero-pelvic junction and brim of the pelvis can by some hook or crook be gotten out without operation regardless of size in the great majority of instances, providing acute blockage and infection does not force one into doing a ureterolithotomy.

What Dr. Reagan has to say about gentleness applies to all urological procedures and those who go after stones as if they were branding a calf will always have a maximum of complications. I have never employed the instrument which Dr. Reagan is using but have always used the Howard stone dislodger for small stones low in the ureter and multiple ureteral catheters left in situ above larger ones. The results, although satisfactory, are certainly not so prompt as those herein reported. I have never liked the idea of catching a stone and being unable to either pull it out or turn it loose, regardless of the fact that all observers say to leave it alone twenty-four hours and it (the instrument) can easily be removed.

There is food for thought in the suggestion that a urethral retention catheter be left in the bladder when ureteral catheters are left in situ. I am doubtful about this, however, because we are attacking the diseased and possibly infected kidney which is already immunized against any local infection present. I would be more afraid of introducing a new infection through such a catheter than of the regurgitation. I have always extracted more than 50 per cent of small stones low in the ureter in my office with only a local anesthetic and the aid of a Howard spiral stone dislodger.

THE RELATIONSHIP BETWEEN SKIN CANCER AND OCCUPATION IN TEXAS: A REVIEW OF 1569 VERIFIED LESIONS OCCURRING IN 1190 PATIENTS*

CHARLES PHILLIPS, M. D.
TEMPLE, TEXAS

The high incidence of cancer of the skin in persons living in Texas has been well known to Texas physicians for a long time, but there has been relatively little written about it. Search for articles on this subject from this State results in the impression that its people are either not aware of this situation or accept it as part of the life of the State and as such have simply not written about it. That has not been the effect upon others, for within a year two large-scale studies have shown by statistics the large reservoir of skin cancer in Texas. In September, 1939, before the third International Cancer Congress Phillips[2] presented a careful analysis of 1,482 microscopically verified lesions of this kind occurring in 1,182 patients seen at the Scott and White Hospital and the Gulf, Colorado and Santa Fe Railroad Hospital between the years of 1920 to 1938, inclusive. He showed that during this period there were 172,350 registrations and that these persons had enough proven skin cancers to give an incidence of one in 116 registrations. It was further shown that microscopical examination of 2,577 skin biopsies of lesions justifiably suspected of being malignant revealed an incidence of one in twenty skin cancers in pathological tissues studied in the laboratories of Scott and White Hospital during the years 1920 to 1938. Records are available of hundreds of small skin lesions probably malignant but studied and treated clinically without microscopical study, but none of these was recorded in the paper.[2] The other large-scale study of this problem in Texas has been carried out by the United States Public Health Service through a survey of cancer in the Fort Worth-Dallas area[6] in 1939, report of which study is soon to be released for publication. The author has permission to quote the findings in that study with regard to the incidence of skin cancer, for 33.8 per cent of 3,683 cancers reported were of the skin. The next highest incidence to the Texas group was revealed by the U. S. Public Health Service survey in Birmingham, Alabama, where 1,725 cases of cancer of all sites reported, showed skin cancer, comprising 30.3 per cent. All available data confirmed the statements made by the author[2] that in the southwestern part of the United States there is one of three great natural reservoirs of skin cancer in the world, the other two being Australia[1] and Argentina.[5]

Naturally, this situation attracts the attention of students of cancer. It will interest the medical profession of Texas to learn that already there is afoot a wide and long-range study of skin cancer in our State through a coöperative effort of the Scott and White Clinic and the Faculty of Medicine of the University of Texas, the State Health Department, and the National Cancer Institute. It is clearly recognized that many problems must be faced, that scientific data must be collected and analyzed, that it requires time and money for such study, and that the size and importance of the problem is a challenge to many to contribute to the study of the problem. In no other state has such a mass study been attempted. Those of us in it would like the privilege of calling on physicians of the State for assistance in various ways.

This particular paper is concerned with an examination of certain data accumulated in this study and especially related to the occupation of 1,190 individuals having 1,569 verified skin cancers and taken from 187,831 registrations of the Scott and White Hospital and the Gulf, Colorado and Santa Fe Railroad Hospital in Temple, Texas, from January 1, 1920, to January 1, 1940. It should be stated that every single growth reported here has been confirmed microscopically and that detailed pathological data are on file. Most of the work has been done by two pathologists, and most of the cancers have been graded on the well known one to four grading system of Broders. In order of frequency these lesions have been found to be basal cell epithelioma, squamous cell epithelioma, melanoma, mixed basal and squamous cell epithelioma, transitional cell epithelioma, and a few cases of adenocarcinoma of sweat or sebaceous glands, fibroxanthosarcoma, and epithelioma arising in sebaceous cysts. Lesions of the mucous membrane surfaces of the eyelids, the lips, the vulva, and the penis are not included. For later studies there are reserved detailed analyses of racial incidence, geographical location, anatomical location,

*Paper number one in a Coöperative Study by the Scott and White Clinic and the Faculty of Medicine of the University of Texas, Galveston.

*Read before the Section on Clinical Pathology, State Medical Association of Texas, Dallas, May 15, 1940.

pathology, and that very interesting consideration, the relationship of climatic exposure to skin pigmentation. Parallel studies by others will include examination of industries, geophysical and climatological factors, different occupations in different parts of the State, and possible carcinogenic agents at work. It has been amazing to see how the approach to the whole problem has widened as more and more study by many persons has been focused on a single problem.

Occupations of these patients have been determined in two ways, by questioning at the time of history-taking, supplemented later by questionnaires sent to these persons. It has been found that these data fall into six or seven groups, with patients having outdoor work constituting the largest groups. Because farming and ranching are alike in their exposure to sunshine, they are summarized together. The work of housewives comes next in order, followed by business activities of various sorts which often allow only moderate outdoor life. The professions are next, followed by laborers and carpenters. The railroad and petroleum industries have furnished us few skin cancers, although it should be noted that one large group of patients considered was seen through service to the Santa Fe Railroad in Texas. There was only one Negro in the series. Very few patients have come from the Gulf coast, and not many from East Texas. Although these figures clearly show the relationship between skin cancer and outdoor occupation, the largest group of farmer-rancher type by no means represents preponderance of patients of this type in the total number of registrations, 187,831. Figures are not at present available as to the occupational division of these patients, but it

TABLE 1.—*Occupation of 546 Patients with Skin Basal Cell Epithelioma.*

	No. of Cases	
Farmer-Rancher	191	(34.7%)
Housewife	89	
Farm Housewife	39	
Business	78	
Professions	34	
Laborer	18	
Carpenter	9	
Oil Industry	5	
Ry. Industry	3	
Student	1	
Soldier	1	
Occ. Unknown	78	
Total	546	

is not to be assumed that persons of outdoor occupation are present in more than an average registration of a Texas clinic of this type, size, and location. In each tabulation to follow there appears an entry of "occupation unknown." It will be manifest that in attempting to collect data on a large series of patients seen over a nineteen-year period many have been lost from even the efficient, modern, follow-up systems, and so complete data are not available on all. Direct correspondence with patients or their families has given us better information than attempts to secure it from physicians.

Five hundred forty-six patients furnished 738 basal cell epitheliomas, with 34.7 per cent belonging to the farmer-rancher classification. This is shown in table 1, which lists eleven occupations and shows that we have been able to trace all but 12.2 per cent of the total so far as occupation is concerned.

TABLE 2.—*Occupation of 594 Patients with Skin Squamous Cell Epithelioma.*

	No. of Cases	
Farmer-Rancher	292	(49.1%)
Housewife	56	
Farm Housewife	14	
Business	47	
Ry. Industry	26	
Professions	16	
Laborer	16	
Carpenter	8	
Oil Industry	5	
Student	1	
Occ. Unknown	94	
Total	594	

In table 2 there is analyzed the squamous cell epithelioma group, in which 596 patients had 644 lesions. Forty-nine and one-tenth per cent of these patients were either farmers or ranchers. This confirms statistically the impression that men working outdoors are more likely to have a squamous than a basal cell epithelioma, for the incidence is practically one-half as against a little over one-third for the basal cell group. In the latter group there were 128 housewives as against seventy of this occupation in the squamous cell group. The occupation of 15.8 per cent of the patients was not known.

TABLE 3.—*Occupation of 124 Patients with Skin Melanoma.*

	No. of Cases	
Farmer	30	(24.1%)
Housewife	27	(21.7%)
Business	12	(9.6%)
Professions	8	
Carpenter	2	
Laborer	2	
Student	2	
Unemployed	1	
Occ. Unknown	40	(32.2%)
Total	124	

In table 3 is shown the occupational spread of 124 persons having 143 cancers of the melanoma type. Experience with this tumor at this time confirms previous writings of the author,[3, 4] with regard to the fact that occupation seems to have no particular relationship as to etiology and that women are just as

likely to have this neoplasm as men. Again it is evident that, since outdoor life affects chiefly exposed parts of the body, melanoma, which occurs in no higher than 24.1 per cent in contrast to about twice that figure in epithelioma, does not appear to be much stimulated by sunshine. Although this same group of cases has been reported on before, we have had poor luck in finding out the occupation of all the patients and have to report that practically one-third have no occupations given.

TABLE 4.—*Occupation of 17 Patients with Skin Mixed Basal and Squamous Cell Epithelioma.*

	No. of Cases	
Farmer	6	(35.2%)
Rancher	2	(13.3%)
Business	4	
Housewife	3	
Professions	1	
Laborer	1	
Total	17	

In table 4 there is listed a group of seventeen patients who had nineteen cancers of the mixed basal and squamous cell type. Together, farmers and ranchers developed 48.5 per cent of the lesions. The group is small, but the same high rate of incidence in outdoor workers holds.

TABLE 5.—*Occupation of 16 Patients with Skin Transitional Cell Epithelioma.*

	No. of Cases	
Farmer	8	(50%)
Housewife	2	
Business	3	
Professions	1	
Oil Industry	1	
Ry. Laborer	1	
Total	16	

Table 5 shows for sixteen patients having nineteen transitional cell epitheliomas the same high rate of incidence for outdoor exposure, in this instance 50 per cent.

TABLE 6.—*Occupation of Six Patients with Adenocarcinoma of Sweat and Sebaceous Glands and Hair Follicles of the Skin.*

	No. of Cases	
Farmer	2	(33.3%)
Rancher	1	
Housewife	1	
Carpenter	1	
Occ. Unknown	1	
Total	6	

Table 6 shows an analysis of a small but interesting group of six carcinomas arising in sweat and sebaceous glands and in hair follicle epithelium. Just a little over one-third of them were seen in persons engaged in outdoor occupation.

When the figures for the farmer-rancher occupation are averaged, they amount to 39.9 per cent of the whole series of 1,190 persons. These workers are all male. Farm and ranch housewives are also exposed to weather and sunshine. When this occupation of women is added to that of the farmer-rancher men, the figure rises to 46.05 per cent of the whole. No account is taken here of the occupation "laborer," for not enough is known of the nature of this work to allow a careful evaluation of its possibilities as to production of skin cancer. Records are accumulating as to the relative amount of sun exposure these patients may have had, but these data are incomplete at the present. Individual studies of the railroad industry and the petroleum industry are projected for the future by those engaged in this long-range study. At the present no analysis of the possible factors in outdoor occupation in Texas has been undertaken, and, inasmuch as this is for future study, no inferences are made as to why these outdoor workers should have more skin cancer than indoor workers living in the same climate.

Behind this study, but not included in it because of incomplete data in 1939 at the two hospitals in this survey, there are clinical data on 233 patients having lesions of the skin actually or potentially cancerous and numbering 337. Of these, there are 116 persons having 158 epitheliomas or melanomas. Thus, nearly half of the skin biopsy material coming into the Clinic laboratory shows some kind of malignant disease of the skin or its accessory structures. Naturally, the staff sees and treats a great many more lesions not considered serious enough to justify biopsy.

The problem of multiple skin cancers in the same person is one worthy of study, for hundreds of the patients reported in this survey had records of from one to twenty-five verified individual epitheliomas. Such persons we describe as having a "skin-cancer skin," but no one today has been able to state exactly the elements entering into this peculiar condition. If we add together all the verified cases of skin cancer in our hospital services for the nineteen years described, there would be 1,306 patients having 1,727 cancers, or 1.3 cancers per person. Care has been taken to study recurrences in relationship to primary growths, but the study of the occupation of the patient need not take into consideration such technical details.

SUMMARY

A statistical survey of the occupations of 1,190 Texas patients having 1,569 micro-

scopically verified skin cancers has been made.

Analysis of nine reported types of occupation is given, and it is seen that men and women engaged in outdoor work or having much sun exposure through working or living conditions have 46.05 per cent of the cancers.

Texas farmers, ranchers, and their wives are more likely to develop malignant tumors than Texans engaged in business, the professions, labor, or the industries.

This survey has been undertaken to stimulate study of one of the most peculiar conditions in the United States, that of the existence of the highest incidence of skin cancer in the population of any state of the Union, according to present figures.

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COORDINATION OF HOSPITAL SURVEYS

The American College of Surgeons and the American Medical Association are joining forces in obtaining the information on which is based the recognition of hospitals and also are coördinating their hospital inspections so as to avoid duplication of effort, *The Journal* of the Association reports in its Dec. 14 issue.

"Each year the Council on Medical Education and Hospitals of the American Medical Association takes a census of registered hospitals, numbering more than 6,000," *The Journal* says. "The American College of Surgeons also has obtained statistical reports from hospitals already meeting the minimum standards of the College and those under consideration for approval. The combination of these reports into one simplified form will be welcome to the hospitals and especially to their administrative officers. Thus, with a minimum of trouble and expense, both the College and the Council secure such information as is necessary for the continuance of their recognition. Also the compiled returns serve as a basis for the Hospital Number of *The Journal of the American Medical Association*, which places essential information in the hands of all hospitals, physicians and others concerned. This should render unnecessary many of the questionnaires now sent to hospitals."

OXYGEN REQUIREMENTS FOR PILOTS

An airplane pilot who is not provided with oxygen begins to lose his mental and physical efficiency at an altitude of about 12,000 feet, Harry G. Armstrong, Toronto, Can., states in *Hygeia, The Health Magazine*. His symptoms are more pronounced at 18,000 feet. Between 18,000 and 22,000 feet his actions are like those of a drunken man, and he becomes either sleepy or very active with outbursts of laughter or rage. At about 25,000 feet unconsciousness occurs and unless descent to a lower altitude is made death results within a few minutes.

CARCINOMA OF THE GALLBLADDER*

I. L. VAN ZANDT, M. D.
FORT WORTH, TEXAS

The necropsies performed by the members of the Department of Pathology of the University of Texas School of Medicine are for the John Sealy Hospital, the State Hospital for Crippled Children, the Galveston State Psychopathic Hospital, Saint Mary's Infirmary, and the Coroner's cases of Galveston County.

In a series of 5,000 consecutive autopsies, 546 malignancies were seen, this being an incidence of 10.92 per cent. Among these 546 malignancies, nine cases of carcinoma of the gallbladder were found, representing 1.65 per cent of all malignancies, and 0.18 per cent of the entire series of autopsies. Erdmann[8] gives an incidence of 1.14 per cent of gallbladder malignancies in his series of gallbladder operations, while Graham[10] states that gallbladder malignancy is approximately 0.8 per cent of all carcinomas.

The age incidence of malignancy of the gallbladder very nearly resembles that of cancer in general. This distribution is shown in table 1. In our series, the average age was 70 years, the youngest being 50 and the oldest 91. The exact age of several of the coroner's cases being unknown was estimated as closely as possible.

TABLE 1.—*Distribution of Cancer in Age Groups.*

Age Distribution	Judd and Gray's[13] per cent	Cooper's[6] per cent	Author's per cent
20-29	0.9	2.0	------
30-39	9.5	4.2	------
40-49	14.9	35.4	------
50-59	40.3	31.2	11.1
60-69	33.1	20.8	44.4
70-79	6.0	4.2	22.2
80-89	------	2.0	11.1
90-99	------	------	11.1

Carcinoma of the gallbladder is more common in women than in men. Cooper[6] states the ratio is roughly 4:1, this probably being due to preponderance of cholelithiasis in women. In his group, 77 per cent were in women, which compares closely with the incidence of 77.7 per cent found in the present series.

Boyce and McFetridge[1] found 52 per cent of carcinomas of the gallbladder in white patients, and 48 per cent in negroes. In our series 77 per cent were white and 22.2 per cent were negroes.

Nothing more is known about the true cause of carcinoma of the gallbladder than about the cause of cancer generally. Many authors think there is a close correlation, if not a direct relationship, between antecedent

*From the Department of Pathology, University of Texas, Medical Branch, Galveston, Texas.
*Read before the Section on Clinical Pathology, State Medical Association of Texas, Dallas, May 15, 1940.

stones and carcinoma. Deaver[7] gives the incidence of stones to carcinoma as about 82 per cent in his series. Illingworth[11] says that there is a definite relationship between the two. Lazarus-Barlow[14] suggest that a small number of stones contain a radioactive substance, which by their long-continued irradiation of the mucosa may cause a malignant degeneration. This view has never been confirmed. Illingworth[11] thinks that an even more important predisposing factor is cholecystitis. Judd and Baumgartner[12] give the incidence of stones to carcinoma as 94 per cent. On the other hand, Burrows[4,5] has placed gallstones, plaster of Paris impregnated with cholesterol, and carcinogenic agents, in the gallbladders of guinea pigs, and in no instance has a malignancy been found to develop. He reviews the work of other investigators and states that their results are in accordance with his own. In our series of nine cases, six were found to have stones, an incidence of 66.6 per cent.

To explain the origin of a squamous cell growth originating from the gallbladder mucosa, Cohnheim's theory of cell rests has been brought forward. However, little credence is given this explanation at the present time. Illingworth[11] states that the origin of a squamous cell growth from a site where normally only columnar epithelium is found can best be thought of as a process of metaplasia. Boyd[2] also believes that an epidermoid carcinoma develops after squamous metaplasia of the columnar epithelium following chronic irritation.

Ewing[9] recognizes three gross types of gallbladder carcinomas: (1) villous, papillomatous, or fungating; (2) gelatinous, and (3) diffuse, flat, infiltrating carcinoma. Several cases of lymphosarcomas[8,12] of the gallbladder have been reported, as has one case of melanocarcinoma.[15] The cases reviewed in the present series were the end-result of a malignant process, and no gross classification was used. Microscopically, two types were found: adenocarcinoma, 88.8 per cent, and squamous cell carcinoma, 11.1 per cent.

Following Broders' classification,[3] four of the tumors were grade 2, two grade 3, and one anaplastic tumor, grade 4. The squamous cell tumor was about a grade 2 malignancy.

Metastases occurred in all cases, but usually were to some adjacent organ. In two cases, the secondary deposits extended past the regional nodes and liver. In one of these, deposits were present in the lungs and kidney, and in the other case the right adrenal gland was involved. The liver was invaded in eight cases, and the regional nodes in five. Webber[16] found that a microscopic determination of the grades of malignancy in a gallbladder tumor was of definite aid in estimating both the likelihood of metastases and the relative length of life of a patient after operation.

Hypostatic pneumonia was listed as the cause of death in two cases, while in one case each peritonitis, subphrenic abscess, mesenteric thrombosis and carcinoma of the gallbladder was given as the cause of death.

SUMMARY

1. In a series of 5,000 necropsies, 546 malignancies of all types were found. Among these were nine cases of carcinoma of the gallbladder, giving an incidence of 1.65 per cent of all malignancies.

2. The ages varied from 50 to 91 years, the average being 70. Seven of the malignancies involving the gallbladder were in females, and two in males. There were only two negroes in the group.

3. Gallstones occurred in six cases.

4. Microscopically, there were eight adenocarcinomas, one squamous cell carcinoma.

5. Metastases occurred in every instance, but for the most part were not widespread. In the majority of cases the liver and regional nodes only were involved.

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1007 Medical Arts Building.

ABSTRACT OF DISCUSSION

Dr. Ellen D. Furey, San Antonio: This discussion might well be prefaced by Snell and Walters' recent observation, "The study of carcinoma of the gallbladder is a gloomy one and there is no evidence to suggest that the years have produced any improvement in either diagnosis or treatment." An optimistic note, however, is that cancer of the gallbladder is

an uncommon condition and one which has become even less common since the advent of earlier diagnosis and removal of gallstones which may constitute a chronic irritating factor, responsible for initiating the malignancy. In 1902 W. J. Mayo in reviewing 405 gallbladder operations found primary cancer in 5 per cent of the series. More recent studies indicate a decrease in this figure to around 0.5 per cent to 1.5 per cent. I found four primary cancers since 1930 in 268 consecutive operative cases of pathologically proven gallbladder disease—an incidence of 1.49+ per cent.

The ratio of cancer of the gallbladder in whites and negroes would perhaps gain significance by a statement of the ratio of autopsies performed on whites and negroes. Similar data might be noted regarding sex distribution.

A rather typical path for metastasis is described by Snell and Walters. The liver is involved early by direct extension, and metastatic deposits in the regional lymph nodes are seen. The cystic duct lymph node is involved among the first. From the lymph nodes in the portal fissure the spread may be to mediastinal, tracheobronchial, and supraclavicular nodes. Cancer of the gallbladder may provide a Krukenberg tumor, and Addison's disease has resulted from metastatic destruction of the adrenals.

There is a shift toward the older age group in the essayist's series as compared with the operative series tabulated from literature. The patients in the four operative cases I studied were 52, 55, 58 and 67 years of age, respectively. Seventy-four per cent of the patients of Judd and Baumgartner's fifty-six reported cases were in the age group from 50 to 60 years. At first glance this suggests that ages noted at time of operation are younger on the whole than those recorded at the time of autopsy. This explanation does not gain credence when we learn that the majority of these patients die within a year after cholecystectomy.

It is interesting to note the failure to produce the neoplasm experimentally. Leitsch and Kazama introduced gallstones and pebbles into the gallbladders of guinea pigs and marked the production of neoplasms. However, Burrows held that their results were questionable; that mucosal proliferation and papillomas resulted under these conditions but that true cancer did not develop. This suggests that while chronic irritation is an important factor in neoplasia, there may be needed as a prerequisite an inherent disposition of the cells to reach beyond the bounds of hyperplasia and become transformed into uncontrolled neoplastic elements.

Dr. Harry R. Levy, Dallas: From the standpoint of surgical diagnosis, carcinoma of the biliary tract is most confusing inasmuch as there are so many questions to be considered in differential diagnosis. The pathology may be found in any of the adjacent viscera, and we should have more specific information from the pathologists so as to enable us to interpret symptoms leading to better diagnosis and earlier operation.

DANGER OF GOLD SALT TREATMENT FOR ARTHRITIS

The danger of gold salt treatment for arthritis is emphasized in *The Journal of the American Medical Association* for Nov. 9 by Norman LaRue Anderson, M. D., and Walter Lincoln Palmer, M. D., Chicago.

"Clinical and experimental evidence in the literature," they state, "indicates that mild, severe or fatal reactions occur in a significant percentage of cases so treated; there is no specific antidote or treatment for these reactions.

"The use of gold salt therapy should be accompanied by full recognition of the many dangers involved."

COMPULSORY LABORATORY TESTS*

A. M. CLARKSON, M. D.
(Director, Venereal Disease Control, Texas State Department of Health)
AUSTIN, TEXAS

The present popular public wave of enthusiasm in regard to control of syphilis and the other venereal diseases is being accompanied by a great deal of public misconception and honest misunderstanding. The public has been misled in regard to the necessity or desirability of legislation requiring compulsory laboratory examinations, such as the Wassermann and other serologic tests, to prevent or control the spread of venereal diseases. It is regrettable that much of the misconception and misinformation regarding scientific venereal disease control comes from medical and public health sources that have not given the subject the study it deserves.

A laboratory test of any kind has never been intended by scientists to be more than an aid in making a correct diagnosis. A negative sputum examination does not mean freedom from tuberculosis. A positive diphtheria culture does not mean that the person from whom it was taken has diphtheria; it may mean that that person is only a carrier of non-virulent diphtheritic germs. A negative Wasserman test does not mean that an individual is free from syphilis in an infectious stage, and a negative smear for gonorrhea does not mean that an individual is not infected with gonorrhea. On the other hand, a positive Wassermann test is not positive proof that the individual on whom it was made has infectious syphilis.

As an illustration, a young man by sex contact may be exposed to syphilis. The first clinical sign of syphilis or primary lesion, is the chancre. The Wassermann test does not usually become positive for from several days to as long as three weeks after the appearance of the chancre, which, in all cases, will be teeming with Spirocheta pallida, the syphilis germ. The individual with a chancre is highly infectious. Let us say that this individual, following the appearance of the chancre, goes to his family physician and is started on correct treatment. Although treatment should be started immediately after finding the Spirocheta pallida in a dark field examination of scrapings or a smear from the chancre, let us further assume that treatment was not started until the blood test had become positive. After this patient has been given treatment from three months to six months, the blood test will in most cases become negative. This patient will, therefore, at this time have a negative blood test but he has not had adequate treatment, and if treatment is discontinued the infectious

stage of the disease will in all probability return.

I do not wish to be misunderstood in saying that thorough medical examinations are not needed or useful. Before two persons marry, they should each go to their family physicians and have thorough examinations on a voluntary basis. All cards should be placed on the table with the family physician. In order that the family physician can make a correct diagnosis, he must have a complete history, an honest, truthful one, and then he must use all of his clinical judgment, making a thorough physical examination and arrive at a proper diagnosis. Not only syphilitic individuals need the advice of their family physicians prior to marriage, but also persons with tuberculosis, nervous disorders, heart disease, and many other physical ailments. Surely the enormous problem of preventing the birth of feeble-minded children or the development of subsequent insanity is even more important to the State than the control of syphilis, as desirable and necessary as that is. Why not, therefore, require by law that each candidate for marriage undergo not only an expert psychiatric examination, but also produce evidence that his or her ancestors for three generations back were mentally normal?

There are diseases other than syphilis that will cause a positive Wasserman test. Malaria, leprosy, relapsing fever, and infectious mononucleosis are four which occur not altogether infrequently in Texas. Here again the physician must exercise his medical and clinical judgment.

Blood tests in incompetent hands do a great deal of harm. It has been found that laboratory tests poorly done label individuals as syphilitic who are free from this disease in as high an average as one out of twenty so tested. On the other hand, poor laboratory work has also been shown to fail to indicate the presence of syphilis. Laws may eventually be needed, but let us not be too hasty in making laws that will work to the detriment of the public health.

Let me give another illustration: Let us take for a premise that a blood test is required by law in premarital examination, as a protective measure against spreading syphilis. In this illustration let us assume that a young man has contracted syphilis, did not receive treatment, and, ten years later, the premarital blood test indicates the presence of syphilis. This young man after ten years has elapsed, if he is then adequately treated, even though the positive Wassermann reaction does not reverse, will never be infectious to anyone, either from contact exposure or to his partner in marriage. In this case, it would be a travesty of law to forbid his marrying after he has received adequate treatment, as far as transmitting syphilis is concerned. Adequate treatment for this man will prevent him from developing heart disease, insanity or some other sequel of syphilis, but even after adequate treatment in such cases, 50 per cent of the patients will never have a reversal of the positive Wassermann reaction. After thorough treatment the young man, in the hypothetical case cited, if he happens to be in the 50 per cent of patients whose Wassermann tests will not reverse after adequate treatment, may safely marry so far as his own health and that of his bride is concerned, but he will go through life with a positive blood Wassermann test. Then, in all fairness, the final decision must rest with the physician as to whether or not marriage is safe.

As far as laws directed against food handlers are concerned, I think that this group of the population is being abused and cannot defend themselves. Syphilis and gonorrhea are rarely or never spread through the medium of intermediate objects, such as food and glassware, handled by cafe operators, and it is no more just that they should be compelled to have blood tests than any other group of the population. Compulsory blood test laws will force the physician to certify that an individual is free from syphilis when the infection may be in the incubation stage and indiscernible by either clinical examination or laboratory test. On the other hand, an individual may have a blood test today and contract syphilis or gonorrhea tomorrow. One can thus see the fallacy in making laws that prescribe that food handlers must have a blood test every six months, as is the usual requirement of such legislation.

States that have recently enacted laws forcing their citizens to undergo blood tests before contracting marriage are finding that these laws are incorrectly written and are doing more harm than good. The State of Illinois passed a premarital blood test law, which became effective in 1937. In the year 1937, only 26,808 couples took out marriage licenses in Chicago, while in the previous year, 1936, 51,000 such licenses were issued.

Let me repeat, the diagnosis of syphilis cannot be made wholly upon laboratory tests.

Laboratory tests in incompetent hands are in many instances false, and even in competent hands may be false. The laboratory test does not tell whether syphilis is in an infectious stage.

Premarital laboratory tests will not prevent infants being born with syphilis. Congenital syphilis is prevented by treatment of

the syphilitic mother through her pregnancy.

Laws making premarital blood tests compulsory will increase illegitimacy and common law marriage. It is like locking the stable door after the horse is stolen. Let us make available more health education to the people and not have laws that will eventually be ignored and turn the public's interest and support completely away from an exceedingly worth while program when scientifically carried on.

The State Medical Association, numbering 4,468 physicians in Texas, and the State Health Department are working shoulder to shoulder in building and conducting an adequate venereal disease program in Texas that will be more effective in eliminating these diseases than any law that can be enacted.

PREOPERATIVE RADIATION OF BREAST CANCER*

EUGENE V. POWELL, M. D.
FORT WORTH, TEXAS

Fortunately for the patient with cancer of the breast, I believe the day is rapidly passing when a surgeon will amputate a breast for malignancy and then later, perhaps only after recurrence, refer the patient for radiation therapy. The improved results being reported by many radiologists, education by tumor clinics, together with the increased experience by physicians generally, are all contributing to earlier and more frequent consultation between the patient's physician, the surgeon, the radiologist, and the pathologist. They can then jointly plan a course of treatment and advise the patient as to the best course to pursue.

At present the usual policy is to recommend radiation therapy before surgery in all cases of cancer of the breast except the very early one, *i. e.*, those in which a small lesion seems limited entirely to the area of origin with no enlarged lymph nodes, skin retraction, or other evidence of metastasis. As a result radiologists are getting the opportunity to have their fellow consultants more closely observe the results of preoperative radiation. Even in the cases of the strictly localized stage-one lesion, a definitely decreasing percentage of patients are being operated on until radiation therapy has had its chance to contribute to the patient's ultimate recovery.

Two things have mainly been responsible for the delayed coöperation between the various physicians concerned. First, having learned that once the diagnosis of cancer is made, all time lost before starting treatment is potentially dangerous, surgeons generally have felt that marking time while waiting for the optimum results of preoperative radiation too seriously jeopardized the patient's ultimate chance of complete recovery. Second, the patient might not submit to an operation at the later date. Experience has been accumulated to show that the first is not true. Too many patients who because of rapidity of growth, extent of involvement, or intercurrent pathology were not operable, have so improved during an enforced waiting period after receiving radiation that the resultant reduction in rate of growth and grade of malignancy and sclerosing channels of metastasis subsequent to operation enabled them to recover.

The second reason, that is, that patients may refuse later surgery, can nearly always be prevented by frankness with the patient at the start. I do not mean to seal her doom, but to tell her that though she has cancer she will have every reasonable chance to recover if she coöperates properly. The course of treatment and the period of subsequent observation should be outlined completely. She should be told that the reason people die of cancer is because they prevent their physicians helping them by postponing treatment too long or by not coöperating during the follow-up period. My experience suggests that patients are usually not as ignorant as we think. They soon know if they have a cancer. Then, if we have not told them, or if we have given evasive answers to their questions, the patients wonder if their doctor really knows what their trouble is, and if perhaps they might not get well faster by following the advice of the radio or the bill-board. Treating patients as intelligent human beings is probably the best way to get them to help us help them.

Since 1927 I have had opportunity to observe the improved results of preoperative radiation in an increasing percentage of cancer patients, generally, and of breast malignancies in particular. In 1934 I suggested, that if the risk is not too great, or the cosmetic or functional result would not be too bad, it is probably best to follow radiation by surgical removal of the site of the original growth in all cases even though an apparent cure had been obtained. I still believe such practice is best because local recurrence is a grave danger and local removal of the original site may get rid of dormant cell rests or other tissue in which cancer once did, and again may start.

The question of the danger of biopsy is still unanswered. Excellent argument is presented on both sides. I think when physical and clinical indications are reasonably definite that a lesion is malignant, the less it is dis-

*Read before the Section on Radiology and Physiotherapy, State Medical Association of Texas, Dallas, May 15, 1940.

turbed prior to treatment the better. This is even more true in such a movable and permeable organ as the breast. When the breast is removed after radiation therapy, it is not often that it will be found entirely sterile if it was originally malignant. The cancer cells may appear "sick" and the fibrous tissue greatly increased, but the experienced microscopist will usually be definite in his report as to the type of lesion found. I have had only three patients in whom the original biopsy showed cancer of the breast whose tissue was sterile on serial section after amputation. I have had many cases in which the diagnosis made clinically before radiation was confirmed microscopically after the breast was removed, even though at the time of operation no evidence of cancer could be found by other methods of examination.

As to technique, practically all of us are at the present time treating these cases with protracted divided dosage, even though few follow either Pfahler's cumulative technique or Coutard's evenly divided daily doses exactly. I try to spread the series of treatment over three to five weeks' time, giving a total of 6,000 to 8,000 roentgens to four or five thoracic fields, using 200 kilovolts, 50 to 70 cm. target skin distance, and ¾ to 1½ mm. copper plus 1 mm. aluminum filter. I prefer to treat patients every other day at the start and later perhaps only twice a week. I have a personal, perhaps foolish idea that these embryonic cells may adapt themselves to resist the routine of regular daily dosage, but that if the interval between treatments is short but more irregular, better results are obtained. In all events it is certainly more convenient for most patients to come for treatment at these less frequent intervals and to receive somewhat larger dosage each time. Fairly intense skin reaction results but with the calamine lotion containing 0.5 per cent phenol applied twice daily from the neck to below the ribs, most patients get by reasonably comfortably and, except for the tanning, their skin will have recovered in about eight or nine weeks after the treatment series is finished.

In women who are still menstruating I always want to induce menopause as early as possible. For that reason sufficient treatment to check menses is given over the ovaries of these younger patients. These treatments are given between the breast treatments. The value of such treatment is still uncertain but I believe it offers patients a better chance of recovery.

A statistical study means little unless data are presented in a larger series of cases than one individual usually has the opportunity to observe. For that reason I shall briefly review only a few individual case histories and record impressions rather than conclusions.

CASE REPORTS

Case 1.—A white woman, age 40, married but never pregnant, reported with a large mass in the upper-outer quadrant of the right breast extending to the nipple, and one palpable node at the outer border of the pectoral muscle. A total of 5,900 roentgens were given in thirteen treatments during five weeks. Six weeks later the breast was removed. The pathologist's report was adenocarcinoma with a large amount of young fibrous tissue throughout. Convalescence was uneventful. There has been no evidence of return since 1934. In 1935 this patient returned with a pelvic tumor which at operation was found to be a papillary carcinoma of the right ovary. The patient was given pelvic and abdominal radiation. She is still in good health and shows no evidence of recurrence of either neoplasm.

Case 2.—A white woman, age 56, had a large nodular tumor in the upper inner quadrant of the right breast with retraction of the nipple and of the skin just below the mass. Between August 23 and September 3, 1927, the patient was given eight treatments of approximately 350 roentgens each. Her breast was removed in October and microscopic section showed carcinoma (type not recorded). Treatment was repeated in November, 1927, as a postoperative prophylactic series. Now, more than twelve years, this patient shows no evidence of recurrence and is in unusually good health for her present age.

Case 3.—A white woman, age 37, was married and had two children, ages 11 and 14. In 1934, biopsy material from a breast sent from a nearby city was found to be scirrhous carcinoma. The patient reported several days later with an infected wound over the outer quadrant of the left breast. In August that year a series of treatments were given, total dosage 5,100 roentgens to the breast and radiation to the pelvis to stop menses. Six weeks later except for the scar at the site of the biopsy the breast seemed normal and the patient refused operation. In March, 1935, the patient returned with recurrence near the left border of the sternum. Radiation was repeated in the same dosage as before and the breast was removed eight weeks later. Serial section at that time showed no evidence of cancer. The patient is now in her fifth year and apparently well.

Case 4.—A white woman, age 63, had never married. On reporting the patient showed extensive involvement of the whole right breast with enlarged nodes in the axilla and along the pectoral border; 8,500 roentgens were given during six weeks in 1936. Because of marked skin reaction operation was delayed four months, when a radical resection was made. Convalescence was uneventful. For a period of two years the patient had severe swelling of her arm but no palpable recurrence. The swelling gradually subsided to a considerable degree, but not entirely. Otherwise the patient is well in her fourth year.

Case 5.—A white woman, age 38, married, had one child, 9 years old; there had been no other pregnancies. She noticed a lump in her breast the day before reporting to her doctor. It was about 2 cm. in diameter. The mass was removed for biopsy and reported a highly malignant duct carcinoma with smaller blood vessels filled with cancer cells. Radiation of 6000 roentgens to the breast area was given in five weeks and menopause induced. The breast was removed seven weeks later though it appeared normal. Serial section showed no evidence of malignant disease. Menses returned after fourteen months and were again checked. The patient

is apparently well now four and one-half years.

The above cases are selected from a series in which fairly complete data have been kept. They show what can sometimes be done toward the control of cancer of the breast; and any cancer patient, even if she is not cured but who can be completely relieved of symptoms for a period of three or more years, especially those who have children not yet grown, feel that she has been helped in a worth while way.

Cancer of the breast can occasionally be cured by radiation alone, but the cures are too infrequent to be depended upon. The breast should be removed six to ten weeks after radiation. The greatest value of preoperative radiation is in improving the patient's chances of a longer comfortable life, much greater delay in recurrence, and a considerable increase in the number of long time "cures."

REFERENCE

1. Powell, E. V.: Radiosensitivity—Its Value as Prognostic Index, Texas State J. Med. 30:405-407 (Oct.) 1934.

605 Medical Arts Building.

ABSTRACT OF DISCUSSION

Dr. S. D. Whitten, Greenville: The solution to the successful treatment of any ailment of the human body is the closest coöperation of, not only the internist, surgeon, radiologist, and pathologist and other specialists, but of the patient, relatives and friends of the patient. For any one specialist to think he is the only one to be consulted is illogical because without coöperation little can be done individually.

In my experience in the use of x-ray in these cases for the past twenty years, I consider it a great aid to treatment of cancer of the breast in any stage, whether operation is the method of choice or x-ray and radium alone are used. Two surgeons in the past have been sending me patients with cancer of the breast. One of these sent only the cases after amputation of the breast and the other one before and after. The one referring cases before amputation got a much higher percentage of five-year cures than did the other. A great many of these patients after radiation do not need surgery but x-ray radiation should follow all cases of surgical removal of the breast for cancer.

Dr. O. N. Mayo, Brownwood: Fifty years ago the operative mortality in cancer of the breast was 23 per cent and three-year cures 4.3 per cent. Improved operative judgment and technique have lowered this to an operative mortality of less than 1 per cent and five-year cures from 71 per cent to zero, depending on the stage of the disease. Pre- and postoperative irradiation has had much to do with this improvement, just how much to preoperative treatment we are unable to say, but I believe that it is as important as the treatment after operation and to the present time preoperative irradiation has not been used as often as it should.

Stage two cases should always be treated by x-ray before operation. If the patient is not in condition to receive x-ray radiation, she is most assuredly not a proper risk for the radical amputation of the breast.

Pfahler states that in stage two cancer of the breast the five-year cure with operation alone is 28 per cent and with pre- and postoperative irradiation this is increased to 57 per cent.

It is difficult to diagnose correctly early or stage-one cancer of the breast. Experienced workers in clinics are often wrong and one they think to be an early case is found at operation to have lymph nodes in the axilla or underneath the pectoral muscles. Cancer cells spread from the periphery, and the most malignant types are grades 3 and 4. These types are the ones most sensitive to x-ray; hence x-ray preoperative treatment to prevent peripheral metastasis and to check or kill the most malignant cells is the treatment of choice.

Dr. L. A. Meyers, Houston: The author should be complimented on his efforts which, I feel, are in the right direction, even though we cannot fully agree upon the procedure of attack in its entirety.

Preoperative therapy should have but one main object, that of prevention of widespread or vascular dissemination. Preoperative radiation should not be directed or imposed for any purpose of sterilizing or curing a lesion, because it must be remembered that only through histopathological information can a positive diagnosis be made, and it is unfair to submit an individual to any long drawn out, depleting and expensive procedure without the full knowledge of a positive diagnosis. Then again, if this is not accomplished and the disease is malignant, the interval between the x-radiation and the surgical intervention should not be sufficiently long to permit cell regeneration of the malignant lesion or, in the absence of complete sterilization, the patient's welfare would be no better during surgical intervention than before irradiation. This statement entails the answer to the question as to which cells are capable of metastatic implantation, and surely we all agree that only those cells so undifferentiated that they are capable of unicellular life cycle activity.

For the above reasons preoperative therapy should be given in sufficient amounts to destroy those cells so undifferentiated as being capable of metastatic implants during surgical intervention. This is in the neighborhood of 1800 *r* to 2000 *r* in breast lesions, and the interval of waiting between the x-ray therapy and the surgical intervention should not exceed forty-eight hours, for at this time the morphology of the mitotic or near mitotic cells show actual degenerative changes. After this interval there are found a few cells of mitotic or near mitotic morphology which show no degenerative changes. These, we must feel, are capable of metastasis during manipulation or surgical intervention.

TRAFFIC ACCIDENTS AND KIDNEY INJURY

Modern high powered automobiles and America's super-highways with their terrific accidents have brought perplexing problems to the early recognition of injuries to the urinary tract, James C. Sargent, M. D., Milwaukee, declares in *The Journal of the American Medical Association* for September 7.

"The mine run of these urinary tract injuries," he states, "are quite symptomless and obscure on admission. Indeed, so obvious and commanding are the symptoms of the other accompanying injuries and so silent are those of the kidney or bladder that important hours are often lost unless the prompt discovery of kidney or bladder injuries is assured through the routine inspection of the urine to note the presence or absence of blood in all accident cases at the time of admittance."

Without such a routine, followed by x-rays, which define the exact injury if blood is present and which suggest proper treatment, Dr. Sargent maintains, "the patient with a fractured pelvis may go many hours before her ruptured bladder is discovered or the man unconscious from skull fracture even bleed to death from an unsuspected kidney injury."

THE PLACE OF ORTHOPTICS IN THE TREATMENT OF EXTRAOCULAR MUSCLE DEFICIENCIES*

CHARLES R. LEES, M. D.
FORT WORTH, TEXAS

It is to be regretted that orthoptics is exploited as it is. This has resulted in a variety of attitudes. One group disregards it because of their distaste for the spectacular. Another, after insufficient preparation, becomes dissatified with the results obtained; and still another, after becoming interested, becomes entangled in the maze of anatomy, physiology, neurology, psychiatry, and mechanics. This paper was not written to sanction the confidence instilled by too little knowledge, but more to break down the sense of futility one develops when confronted with a procedure as highly technical as the physiology of binocular vision and its abnormalities. The primary purpose of this paper is to appeal to ophthalmologists, to make a place for orthoptics in their practices. I believe what I am to say, is being said after the pendulum has reached an even swing and is not tainted with overenthusiasm. About ten years ago, I became interested in this subject. My first efforts were gymnastic in nature. In the interval, I waxed hot and cold on the subject, until now I have at least reached an idea upon its place in my formulary.

Many times I think our interest is lost in the maze of statistics, charts, and optical physics, so necessary for elaboration, and when the writer resumes his line of thought, our receptive attitude has lapsed. To those who are students of physiological optics and optical physics, I beg forbearance with those of us who are preoccupied with other phases of ophthalmology, and have let ourselves forget data we do not use in every-day practice. The purpose of this paper is to bring the practice of orthoptics out of the fog of highly specialized centers, laboratory theories, and the thought that only certain ophthalmologists may accomplish results.

I cannot stress too much the need of proper equipment. The only addition necessary to any properly equipped general ophthalmic office, is some form of stereo-orthopter. An instrument of this sort does not confine the oculist to any one particular thought on how to give exercises; but gives him a means of training those faculties he deems necessary in his particular case. The operation of such an instrument is simple and can be taught to any office assistant at all familiar with the routine of an ophthalmic office. It it true time will have to be spent in teaching her the basic principles of fusion, depth perception, muscle dynamics, etc., but the time spent is certainly well paid for in removing the load of orthoptics from the oculist's time. It is my custom to start the first exercise, outline the form of treatment, and I am then free until the end of the second week when I check the results obtained. My assistant fully realizes her limitations and readily consults me on any particular which seems out of the ordinary routine.

Let us consider the etiological factors of muscle imbalance. The most logical grouping to me is that of M. A. Pugh, of the Royal London Ophthalmic Hospital. He gives, in 1,000 cases: (1) physical defects, 10 per cent; (2) refractive error, 50 per cent; (3) fusion defects, 20 per cent; (4) psychological, 20 per cent. Before dwelling upon these in groups, I believe it well to consider certain generalities which bear possibly on all of them. We know from biology, that poor genes beget poor progeny, and I believe that accounts for the predominant number of tropias (not phorias) among our underprivileged. To me a phoria is simply a fusion center which has lessened in breadth, but is still within the capacity of the patient to maintain corresponding retinal points of stimulation. Should this deficiency continue or some peripheral factor, such as increased interpupillary distance, ocular disease, refractive error, or accommodative spasm be superimposed, the case becomes an actual tropia or squint. One cannot disregard the patient's general health. If diseased teeth, tonsils, *et cetera*, can precipitate a muscle imbalance, certainly those disturbing factors should be removed to get the most out of a procedure, orthoptic or surgical.

The physical defect group is indeed small, being mostly post-traumatic eyes and muscle anomalies. I believe the excessive muscular development seen at operation is secondary to the conditions rather than an etiological factor. Only one case within my observation, a bibellied internus, contradicts this thought.

The refractive error group is by far the larger group; exceeding, I think, Pugh's figure of 50 per cent. One cannot know the relation of accommodation to convergence as described by Donder's and Nagel and dispute this fact. Certainly the close innervational relationship of the ciliary muscle to the internus clarifies this point, as well as explaining the full correction of the hyperopia of an esophoria or tropia, and under correction of the myopia of an exophoria or tropia. Here again, whether it be a phoria or tropia, is a matter of degree, with the added factor of suppression.

The fusion defect group, though not large in per cent, is the more important from an orthoptic view. I am firmly convinced

*Read before the Section on Eye, Ear, Nose and Throat, State Medical Association of Texas, Dallas, May 14, 1940.

orthoptic training is mainly neurological or education of the fusion center within the brain. This of course includes our senses or urge of convergence and divergence. There is probably some actual muscular development attained by exercises, just as gymnastics develop a biceps, but I am sure that I have never been able to note any macroscopic difference in exercised cases at operation, from those who have not received exercises. We have to consider the capacity of an individual fusion center. There are some patients in whom fusion can never be developed, just as there are mental capacities in any other educational endeavor. I know there are texts which state the fusion center is incapable of development after being idle five to seven years, and some orthoptists say fusion cannot be developed after the patient is 20 years of age; but I have a few patients who have reached puberty, and one woman 23 years of age, who have attained binocular vision with depth perception. I can conceive of a psychological group but I have never had any such patient under observation. The imitative child is better treated with a strap than a stereo-orthopter. Mental trauma, and like cases may develop phorias, but I imagine the psychic phase is more contributing than etiological.

Since this paper deals with orthoptic training, I believe we can accomplish more by taking each item within the scope of orthoptics separately, rather than generalize.

In esophorias we assume that the patient has been properly refracted. As esophorias are usually accommodative, it is my custom to wait two weeks before doing ductions, convergence and accommodation amplitudes. Most of the low or moderate esophorias will disappear under the relaxation of their accommodation by proper refraction, and it is not fair to condemn patients to exercises until we are sure we will receive their normal ductions (after relaxation of accommodation) upon testing. To those that persist, exercises of base-in are instituted. Training is continued until the patient is symptom-free and some reserve is built up. I shall relate my procedures in general later. I have not been able to obtain patient coöperation by home prism treatment, supplementing orthoptics. The divided cards used in a stereoscope are more within patient understanding.

I formerly believed that orthoptics should improve any esotropia where the angle of deviation permitted the two targets to be superimposed, with the amount of prism base-out available in the instrument. This disregards the false projection the patient has developed secondary to his deviation. I believe it more logical to assume the angle of deviation to be indicative of the intensity of converging urge. I mean by this, that possibly a fifteen to twenty degree esotropia is caused by an innervational impulse of such strength that can be broken down by training; while a greater angle probably represents a neuromuscular impulse too well developed to be broken down by orthoptics. Surgery, from an orthoptic view, is only a means of suddenly breaking up fixed habits. After this disruption of fixed habits, any one of three things may occur. A patient may upon finding his visual axis parallel, develop normal projection and fuse with his eyes straight. He may find himself with a false diplopia due to his false projection and go through a transitional period of readjusting his projection until he loses the diplopia and fuses the images with visual axis parallel. On the other hand, the attempt to reduce the false projection may be unsuccessful, because the habit is too fixed and the urge too great. Is it not within reason, that a procedure intended to guide and train these habits would reduce the hazard of a patient falling into the third group? Here we have the patient whose habits are so fixed that, even though the visual axis be parallel, he always has diplopia. Some disregard it and maintain parallelism; others lose their parallelism and revert to their original state.

One may have only the first degree of fusion, that is, the ability to superimpose the two images. Anything short of this is not within the scope of orthoptics. If one can attain superimposed images, there is a possibility of training the second degree of fusion, that is, single binocular vision, and ultimately the third degree as evidenced by binocular depth perception.

In monocular esotropia there is always a fusion faculty present; though under-developed, it is probably capable of training. Very often in monocular esotropia we find an amblyopia exanopsia. In children before the age of 6 or 7 years, it is important to preserve all the vision possible by the use of occlusion, atropine, and so forth. If the oculist assures himself that the amblyopia is not from organic or congenital causes, the case is within the scope of orthoptic training.

Targets have been devised of varying degrees of retinal interest. The instrument is set to simultaneous retinal stimulation by means of the synoptophore attachment, the amblyopic eye target brightened and the other barely illuminated. By alternate use of the flasher and continuous arrangements, one stimulates the "torpid" retina. I believe this should be accompanied by occlusion of the normal eye, but do not think this procedure responsible entirely for the results obtained. The successive use of targets requiring more discriminate vision brings one

to improved visual acuity. I have not had many of these cases. The best result obtained was from 20/200 to 20/40, most cases attaining 20/60 to 20/80 feeling that their result was good enough. Fuch's states that a vision of at least 20/50 is necessary to training the two eyes to fuse, but my own experience extends to 20/80, and one of my friends states he has seen binocular single vision with depth perception in a case of 20/200.

I do not think that the use of orthoptics broadens the fusion field of the macula actually, but can conceive how it makes more alert that portion of the retina designated as the fusion field. A chart devised by Pugh may clarify this. If the fusional urge at the fovea is designated as one, five degrees out from the fovea represents one-fourth that urge; ten degrees, one-fifteenth; twenty degrees, one-fortieth; thirty degrees, one-seventieth; and forty degrees, one-two hundredths. Surely if training will bring the alacrity of this area to normal, the correction of the deviation, in most cases, must be a matter of degree of development.

In those cases coming within the scope of surgery, I do not think the treatment complete without postoperative orthoptic training. I wish to stress the fact that no operative case should be subjected to training for at least four weeks after operation. It is against surgical principles to subject a wounded muscle to such strenuous function until that muscle has not only healed, but gained strength and undergone a certain amount of readjustment to its new attachment and tone.

In alternating esotropia, the situation is very different. Whereas most monocular esotropia is refractive in its origin, the alternating type is almost universally assumed to be due to a deficient or entirely absent fusion faculty. This is verified by the both visual acuities being nearly the same and no attempt on the part of the patient to fix with one eye, upon use of the cover test. I consider all alternans cases primarily surgical, to be followed by orthoptic training postoperatively, which is the reverse of the thought on monocular esotropia.

The most satisfactory results obtained in orthoptics are gotten in the exophorias. This is probably due to natural forces; that is, convergence is a natural and voluntary movement. The power of convergence greatly exceeds that of divergence both from fusional urge, and actual muscular development; naturally if we exercise adducting force of three or four times the capacity of an abduction force, we should expect three or four times the results obtained in that abduction force, namely, the adduction.

There are several types of exophoria; though orthoptic training be the same, it is well to consider them.

We are all familiar with the accommodative type, such as the myopes. Here as in esophoria, we wait until proper refraction to make a diagnosis requiring orthoptic training. Those which persist after proper refraction usually respond to training with base-out exercises.

There is also the presbyope, who through his loss of accommodation, recedes his reading material. In doing this he subdues his fusional urge and relaxes his internal rectus tone. Upon being refracted properly, he is suddenly thrown into what is to his eyes a condition proximal to his optimum reading distance. Here orthoptic training oftentimes will break down his old habits or bad habits of near vision occasioned by a remote reading distance and make the patient comfortable while wearing a proper correction.

In my practice I have found an interesting group of exophorias, among pituitary cases. It is conceded that their universally wide interpupillary distance accounts for the exophoria, and the few cases we have had, have received ocular comfort with base-out exercises. One young man, a proven case of pituitary dysfunction, had suffered headaches for five years, despite intelligent pituitary therapy. Orthoptic training for three months resulted in complete relief of his headaches. As there is no definite known cause of the headache associated with pituitary disease, I wonder if the accompanying exophoria might not be at least the exciting cause of headache in these cases. I should appreciate attention to this observation and hearing from ophthalmologists encountering this condition in their practice of orthoptics.

The exotropias fall into the scope of orthoptics much more than the esotropias, for the same reasons given above in the exophorias. We have been able to get non-operative results much more often. The orthoptic treatment of the hyperphorias has been universally unsuccessful in my hands. My treatment consists in proper refraction and reference of such patients to the internist. It has been my experience that the exciting cause in most cases is an endocrine gland imbalance, and after that is treated, the patient is able to dispense with the prisms incorporated in their lens. I do not mean to shun the hyperphorias, but I do not believe them within the scope of orthoptic training. In regard to the cyclophorias, I have had no experience, but have come to place them with the hyperphorias as far as orthoptics are concerned.

Having dispensed with the various conditions in which orthoptics may be of benefit, I feel that there are some few details asso-

ciated with the practice of orthoptics which should be included in this paper.

Once it has been decided that the case is one for orthoptic training, the ophthamologist is now confronted with the hardest part of orthoptics, that of explaining to the patient. I know of no situation where it is more important to thoroughly familiarize a patient with his condition than here. The optometrists and their indiscriminate use of "eye exercises" has placed orthoptics in the class of something that rings a bell, flashes a light, and toots a whistle. This attitude is not only found in the patient, but many family physicians, and even members of our own group have condemned the procedure without investigation or trial. It is my policy to familiarize my patients with their condition to the extent that when I am through talking, they know what is necessary almost without being told. I explain that the length of time spent in exercises will vary with each case and their ability or capacity not only to learn, but to retain. They are made to realize fully that exercises will be given as long as improvement can be shown, or until a sufficient amount of reserve in excess of comfort is built up.

The exercises are given at least three times a week with supplementary home exercises when the condition permits. The amount of base-in or base-out added each time varies, being the maximum amount the patient can hold or fuse. Some targets are easier for the patient to hold in fusion than others, and it is important to change targets frequenlty, so as to maintain interest. Here is where a well trained assistant is so necessary. She has to exude her enthusiasm or the patient will very passively look at what is shown him. It is very important that the patient's interest be intent. In some cases we apparently reach a saturation point. By that, I mean the patients have reached a point where they can no longer retain any more training, a condition we have all experienced in "boning" for a final examination in medical school. I give exercises for a short period of time after this point is reached even though no objective evidence of improvement may be shown. This is done in order to rule out those cases which have apparently a mental barrier at this point, and only repeated pounding will break through this barrier. This is well illustrated in one doctor's son who started exercises with 10 diopters base-out June 23, 1937, increased to 45 diopters base-out July 7, and was stationary until November 15, when he increased to 50 base-out, 55 base-out December 1, 60 base-out December 13, and reached 80 diopters base-out January 24, 1938. I have had other patients who reached a stationary point or were comfortable, and exercises were stopped for six to eight weeks, when they returned and were checked to see how much they had retained. There is usually some loss, but this is rapidly regained as a rule. This procedure is repeated if necessary, tapering the patient off as one sees fit. Each patient is tested for improvement every two weeks; before that period is too early to tell, and later may result in giving unnecessary exercises.

In closing, I wish to say that I realize this paper does not contain, and has apparently disregarded many of the theories so necessary in orthoptics, but I have attempted to deal more with the practice of orthoptics than with the why or wherefore. If, in my effort to simplify this paper, I have been somewhat academic, I ask forbearance.

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806 Medical Arts Building.

ABSTRACT OF DISCUSSION

Dr. Van D. Rathgeber, Fort Worth: I have enjoyed Dr. Lees' presentation of this complex subject in simplified form. He is to be commended for avoiding the many conflicting theories and presenting his subject without becoming "entangled in the maze of anatomy, physiology, neurology, psychiatry and mechanics." Since the exact basis for the production and maintenance of fusion remains in the realm of theory, I shall follow his example and avoid any such consideration, although some of the statements made by him are not in accord with my way of thinking.

The age at which orthoptic training should be started depends more on the intellectual age of the patient rather than on his chronological age. Dull children make poor subjects for such training as their attention span is limited and their interest and coöperation hard to maintain.

I heartily agree with the combining of occlusion of the good eye and orthoptic training at the office to bring about a more rapid development of vision in the deviating eye. Training by occlusion should be confined to those cases that have central fixation when the fixing eye is covered. Those cases with false projection had best be treated by simultaneous stimulation of both foveas.

Home training is, I believe, of great value but cannot be used except in selected cases. I feel that these patients do better and progress more rapidly if they can get the exercises daily, or several times daily at home. It is my practice to limit home training to those cases in which the difference in visual acuity in the two eyes is not too great and where there is normal retinal correspondence. Children seem to enjoy the chiroscope and will often work better for longer periods of time tracing pictures of various objects, which they bring to the oculist, than they will when forced to look at a set series of cards through the stereoscope over and over again.

The problem that gives me the most trouble in orthoptics is not the diagnosis of the case but in getting patients to coöperate and to take the exercises regularly for a long period of time. All too frequently they lose interest and become discouraged when improvement is not rapid and continuous. In

dealing with children, the mothers soon tire of spending three or more afternoons a week bringing the child in for orthoptic exercises. Another obstacle that makes it difficult to handle these cases in the office as private patients, is that of expense. Whether the charge is made so much per visit or so much a month, it still figures out to be rather expensive when continued over a period of months. My salesmanship must need some training, because I find the problem of selling the idea of orthoptic training and keeping it sold a most difficult one.

I want to again compliment Dr. Lees on his paper.

THE GLANDS OF THE POSTERIOR FEMALE URETHRA*

GEORGE T. CALDWELL, M. D.
DALLAS, TEXAS

About ten years ago, in coöperation with Dr. A. I. Folsom, I first began the study of the glands of the posterior half of the female urethra. It was our purpose to acquaint ourselves with the occurrence and variations of these glands in the human female, and to accumulate data concerning their pathologic importance. The first part of this task is a comparatively easy one, but the second portion of the program is extremely difficult and it is yet far from completion.

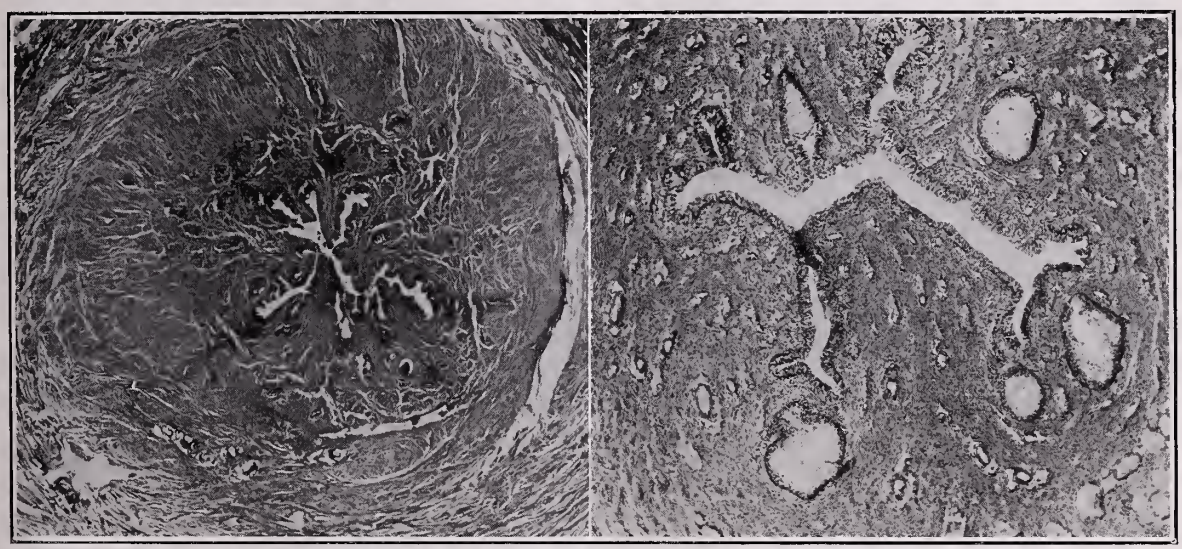

FIG. 1. (Left.) Low power view of cross section of the urethra of a girl, age 17, showing thick submucous layer. (Right.) Section of urethra of a stillborn child, showing gland structures in the form of solid cords.

The occurrence of glands, in varying numbers, in the proximal or posterior half of the female urethra, has been recognized since the early observations of Virchow[10] in 1853. Their embryological development, and their relationship to homologous male structures, have been the subject of several careful studies. Consideration of their pathologic importance has been of much more recent date, and additional study will be required before their exact relationship to definite clinical syndromes is entirely clarified.

Although these glands were first observed more than eighty years ago, their occurrence did not receive much attention until comparatively recent years. In fact, Folsom's suggestion in 1931[4], that these glands might be indirectly responsible for certain bladder irritations in women and for the higher incidence of pyelitis in girls, has done much to arouse new interest in the anatomy as well as the pathology of the female urethra, and at the same time, it has elicited some unwarranted skepticism concerning the occurrence of gland structures in the posterior female urethra. For instance, in 1936, Cabot[1] states that the evidence in regard to the existence of important glandular structures in the proximal two-thirds of the female urethra has been inconclusive. He states further that a survey of the literature is likely to leave one very much confused as to the existence of such glands. Furthermore, Cabot and Shoemaker[2] once more deny the existence of true glands in the posterior urethra and feel that the structures so described are no more than ramifying mucosal crypts. Likewise, MacKenzie and Beck[8] in a histologic study of many specimens conclude that true periurethral glands do not exist, but that ridges, crypts, folds and invaginations of the mucosa are mistaken for glands.

It is apparent from the foregoing statements that the appearance, incidence and variations in these structures should be carefully studied by an unbiased observer, and the findings faithfully recorded as observed.

Piersol's Anatomy[5] contains this notation:

*Read before the Section on Clinical Pathology, State Medical Association of Texas, Dallas, May 15, 1940.

In the female the urethral glands are represented by small groups of tubules that open by minute orifices on the mucous surface. These glands are most numerous in the proximal part of the urethra and often, especially in the aged, contain concretions resembling those found in the prostatic tubules (Luschka). The mucosa is also beset with small, pit-like depressions into which the ducts of the glands frequently empty. Cunningham's Anatomy[3] states that numerous minute urethral glands and pit-like urethral lacunae open into the lumen of the female urethra. This authority bluntly states that these glands represent the prostatic glands of the male.

Korenchevsky and Dennison[7] describe these urethral glands as they occur in women as plain or convoluted tubules lined with two layers of columnar epithelium similar in appearance to that of the human male prostate. The number of tubules found in different women varies from very few to many. They may be situated on all sides of the urethra or scattered only in the septum separating the urethra from the vagina, or only on some small part of the urethra, often in an area near the bladder.

As to the time of development of these urethral glands, Johnson[6] found that although the glands were totally absent in a female embryo of 43 mm., they were already present in considerable numbers in a female embryo of 60 mm. He described the gland buds as being situated on the anterior, lateral and posterior surfaces of the urethra, and in this respect, corresponding almost exactly to the arrangement found in the male. He states further that their structure is likewise similar to that of the male. They are rounded, solid, epithelial growths which extend into the surrounding mesenchyme, the majority being directed toward the bladder. In the 60 mm. human female embryo, he counted fourteen of these periurethral glands. In an embryo of 75 mm., the glands were larger and more numerous. They were still solid epithelial processes, and at this stage twenty-six separate glands were counted. Similar but larger glands were observed in female fetuses of 176 mm., 215 mm., and 275 mm.

It is apparent, therefore, that the urethral glands are present in human embryos after the 60 mm. stage and in human fetuses in all the various stages examined.

Petrowa and his associates[9] have recently given a very satisfactory description of the structure of the female urethra.

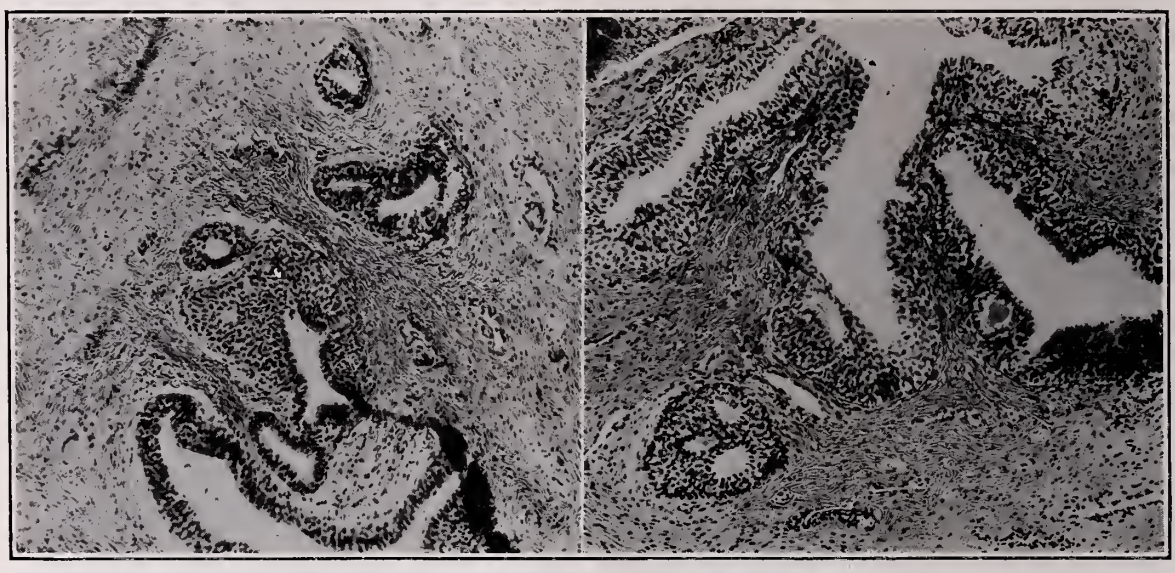

Fig. 2. (Left.) Section of urethra of a baby girl, age 10. The glands are small but definite.
(Right.) Urethra of a girl, aged 3. A few mucosal crypts are present in the lining epithelium of the urethra, and a few glands and crypts contain secretion.

REPORT OF THE STUDY OF 105 URETHRAS FROM HUMAN FEMALES REPRESENTING ALL THE VARIOUS AGE PERIODS

In the early part of this study, the urethras were obtained from female cadavers used for dissection. These specimens varied markedly in their state of preservation, depending upon the success attained in embalming. Some were well preserved and almost every one was usable for determining the presence of glands; only two were discarded because of loss of staining properties due to poor fixation. However, many of these urethras were unsatisfactory for detailed study and for microphotography because of extensive autolytic changes with

desquamation of lining epithelium and loss of precise staining. Furthermore, no record accompanied these cadaver urethras, so that no definite statement could be made of the ages of the individuals from whom the specimens were obtained.

To circumvent these objections, urethras were then removed routinely at autopsy on female subjects. In this way, an ample supply could be obtained, representing all age periods from premature fetuses, through all stages of early and adult life, even to old age.

The urethra together with the adjacent portion of the urinary bladder and the surrounding fibrous and fatty tissues was removed in every case. These specimens were given preliminary fixation in formalin to secure a measure of firmness before attempting to cut blocks for the preparation of sections. After partial fixation of these rather bulky masses, transverse sections were made through the urethra and surrounding tissues, so as to secure three or four blocks, each approximately 4 mm. thick. The most proximal one of these blocks included the slight enlargement of the lumen at the outlet of the urinary bladder. Together, these blocks constituted from 1.2 to 1.6 cm. of that portion of the urethra adjacent to the bladder, and included the posterior one-half or sometimes slightly more of the female urethra.

These blocks were then further fixed in formalin, dehydrated in alcohols and embedded in collodion. Sections were prepared from all of these blocks and stained routinely with hematoxylin and eosin. The sections thus obtained must be considered fairly representative of the structures found in this portion of the urethra.

The adult female urethra is a slightly curved canal about 3.5 cm. long, extending from the urinary bladder to the vestibule. Its wall contains two main muscle layers which surround a fairly thick and markedly vascular submucous layer, and this, in turn, is bordered by the lining epithelium of the mucosa, which immediately surrounds the distensible lumen of the urethra. Except during the passage of fluid, the lumen is closed by the apposition of its anterior and posterior walls. When collapsed, the mucosa is thrown into conspicuous longitudinal folds.

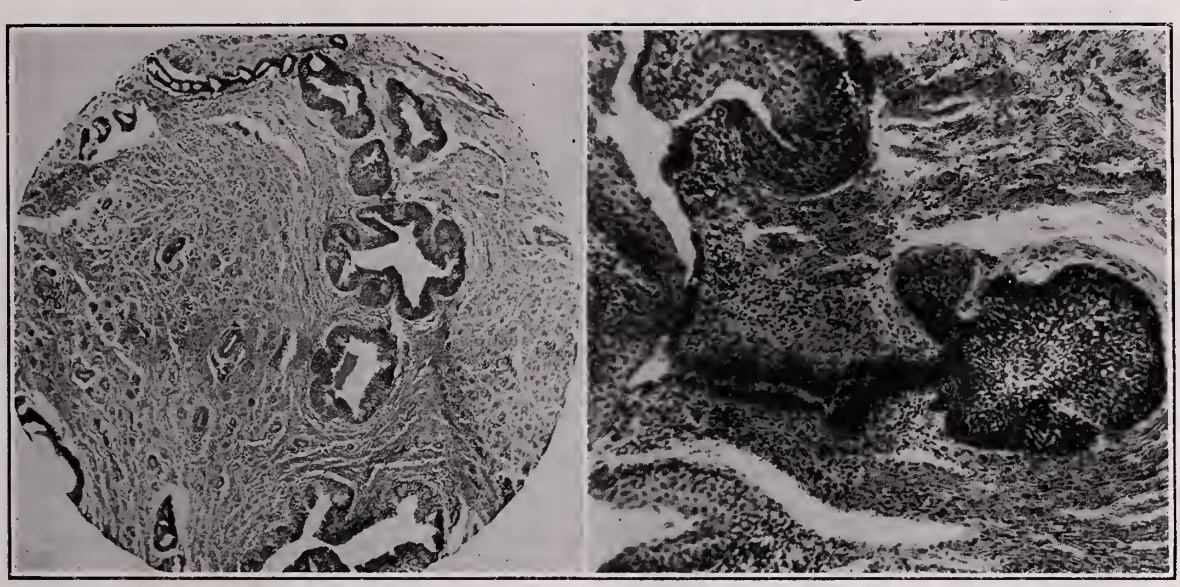

FIG. 3. (Left.) Section of urethra of a girl, age 17. A clump of glands extends far out into the submucosa.
(Right.) Section of the urethra of a negro woman, age 26. The section is cut through the duct-like connection with the lumen of the urethra.

The epithelial lining of the urethra is variable in type. It is continuous with the stratified squamous epithelium of the vestibule anteriorly, and posteriorly, with the transitional epithelium of the urinary bladder. The point of change of the type of epithelium in the urethra is variable. Some urethras are almost entirely lined by stratified squamous epithelium, while in others the transitional epithelium extends practically to the meatus. The folding of the lining epithelium is easily differentiated from the associated urethral glands and should lead to no serious confusion, although a few writers have intimated that folds of the mucosa have been mistaken for urethral glands.

The gland structures which are here illustrated are situated in the mucosa and in the submucosa of the urethra, and open by small orifices into the lumen of the urethra.

As determined by this study of more than 100 female urethras, these posterior urethral

glands are nearly constantly present, although it must be stated that they vary markedly in number and in size in different urethral specimens. In a few urethras, they are relatively large and quite conspicuous as seen in tissue sections. In most urethras, they can be demonstrated as well-defined anatomic structures, concerning the occurrence of which there can be no reasonable doubt. In a very small number of human urethras, apparently not more than 5 per cent as judged by our materials, the glands are exceedingly small and inconspicuous, and in two of our cases, there was even some doubt as to whether we were justified in using the term glands for the few diminutive structures present.

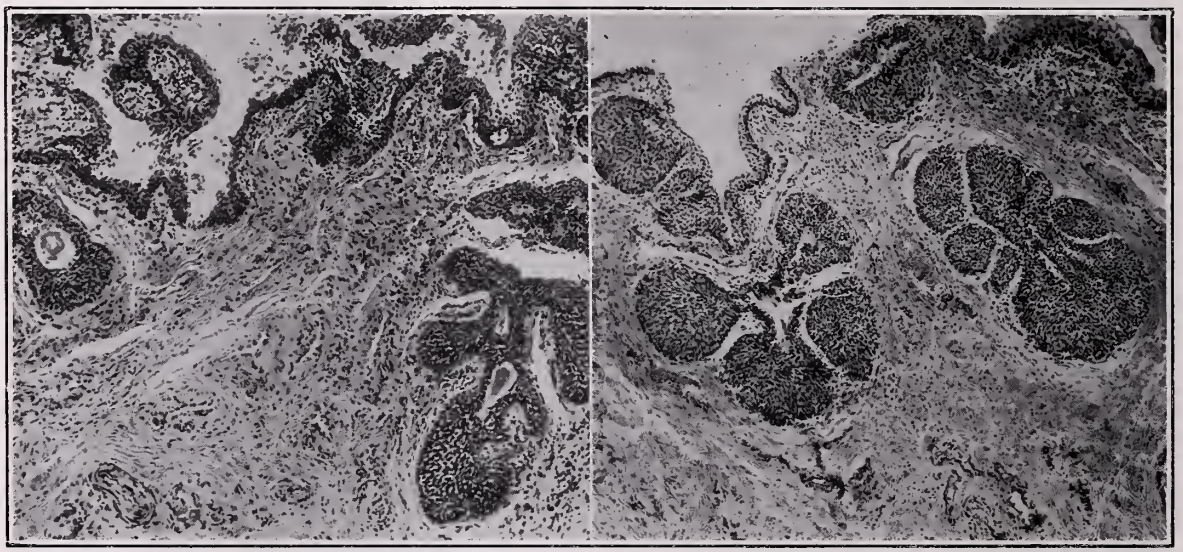

Fig. 4. (Left.) Section of the urethra of an unmarried woman, age 31. The main glandular mass reveals a branching of the glands and an alveolar structure.
(Right.) Section of the urethra of a white woman, age 40. Note the large epithelial masses with poorly formed gland lumens.

These urethral glands seemed to occur somewhat more frequently in the sections from the block representing that portion of the urethra immediately adjacent to the urinary bladder, but when these glands are numerous and well developed, it is usual to find them in sections from all of the blocks taken from the posterior urethra and representing the proximal one-half of the female urethra. So far as the circumference of the urethra is concerned, these glands may occur in any part of the periphery—that is, on all sides of the lumen. No predominant location could be made out with certainty.

These urethral glands are present at all age periods; quite naturally, since they are present in the embryo and in early fetal life, they are present in the newborn and in early childhood and they persist throughout all the later age periods.

Since the age of the individual was not definitely known in the case of the urethras obtained from cadavers, urethras obtained from twenty-five recent autopsies have been restudied and arranged according to age. The individuals from whom these specimens were obtained ranged from newborn to 77 years of age, with the great majority representing young adult females and women of middle age. The glands are found with equal frequency in all age groups, from newborn through infancy, childhood, young adults to middle and old age. They are well developed in childhood in most instances; however, a few of the cell masses seemed to lack the definite lumens present in later years. Accumulated secretion was present in the lumen of the glands of a child of 3 years and in those of a girl of 17 years. Secretion was more frequently present in inspissated form in adult life and especially in the later age periods.

After 40 years of age, it was the rule rather than the exception to find inspissated secretion in some of the well developed glands in every urethra studied. In only one instance, and that in the case of a woman 77 years of age, did the inspissated mass in the lumen of one or more glands possess a brownish color such as is seen frequently in corpora amylacea in the male prostate.

The masses of inspissated secretion in the urethral glands of the female possess staining properties quite similar to those of corpora amylacea. They are more homogeneous and lack the laminated appearance so characteristic of corpora amylacea of the male prostate.

The glands of the posterior female urethra

possess a very distinctive appearance. In the first place, they are tubular or tubulo-alveolar glands, some of which display definite branching. The larger glands extend into the submucosa and run for a short distance roughly parallel to the lumen of the urethra. These glands usually possess relatively small lumens, although these are not infrequently distended by retained and inspissated secretions. The gland lumen is immediately surrounded by a layer of cylindrical epithelium with the nuclei occupying the outer half of the cytoplasm, leaving a layer of finely granular cytoplasm adjacent to the lumen. Outside of this orderly layer of epithelium, there is a second less regular layer of epithelial cells, and sometimes even a third or a fourth layer of epithelial cells. The multiplicity of cell layers is the outstanding characteristic of these glands, and this structure seems to differentiate them from most glands seen elsewhere in the human body. The actual number of layers seems to differ from place to place, but it is evident that the lining epithelium is more than one cell deep and also that the surface cells are usually of cylindrical type. The cells lining acini which are distended with secretion may be distinctly flattened.

The cytoplasm of the lining cylindrical cells appears to be finely granular with eosinophilic granules, which stain somewhat like the secretion in the lumen. It is quite probable that the eosinophilic granules in the cytoplasm are discharged into the lumen of the acinus in the process of secretion. If this secretion is homologous to that of the prostate gland, it should contain a nucleoprotein, lecithin, choline and various other constituents, but such determinations are largely excluded by the small amounts of material available for study.

The purpose of this paper is chiefly to establish the incidence of glands in the posterior portion of the human female urethra, to point out their variability in different individuals and to demonstrate their similarity to the homologous glands in the male which constitute the prostate gland. There can be no doubt that such gland structures exist and that they are practically constant in their incidence, but they vary decidedly in the extent of their development in different individuals. They are present at all age periods, and judged by the usual standards, they must be considered glands. Furthermore, they are tubular and tubulo-alveolar glands with distinct branching tendencies.

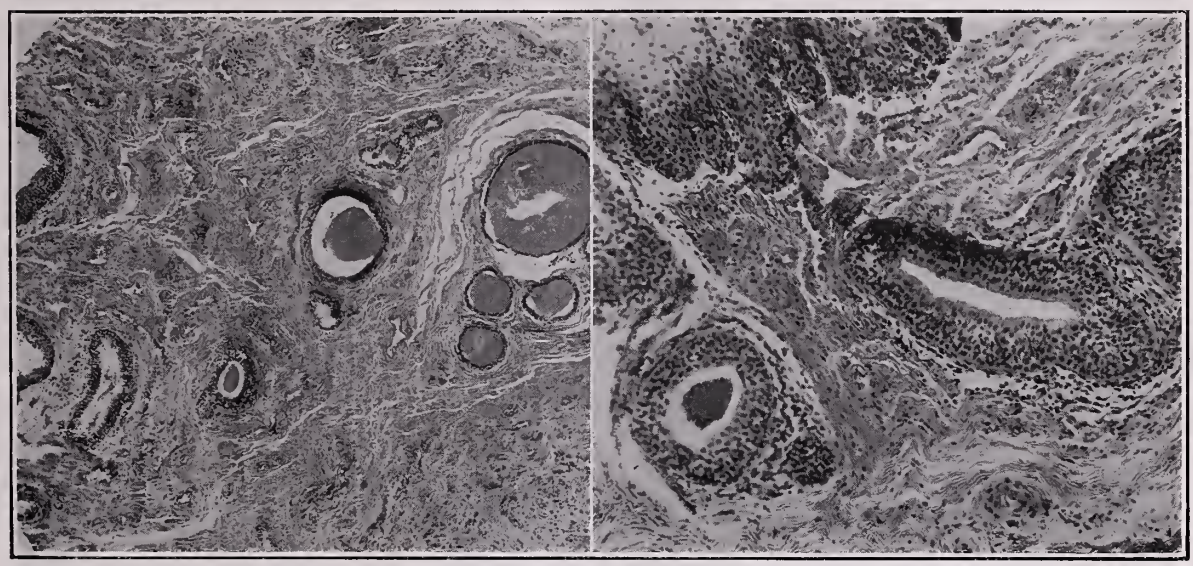

FIG. 5. (Left) Section of urethra of a white woman, age 60. The glands extend deeply into the submucosa and they are distended with secretion.
(Right.) Section of the urethra of woman, age 62. The multiple layers of epithelial cells in the glands are clearly shown. The urethra is lined by stratified squamous epithelium.

They produce a protein-containing secretion which becomes inspissated and occludes the lumens of alveoli and of tubules. In some instances, the retained secretions form definite retention cysts. These glands possess a structure unlike that seen elsewhere in the human female. This characteristic structure makes it quite unlikely that these are simply mucus-secreting glands. They possess a structure and elaborate a secretion comparable only to the prostatic glands of the male. As such, these glands must be considered persistent rudimentary structures which are inhibited in the female by an adverse hormone balance. They are embryonic remnants which may have no essential func-

tion in the female, but which are apparently capable of some response to functional stimuli in the normal female, as indicated by the frequent occurrence of retained secretion within the glands. The experimental evidence furnished by Korenchevsky is to the effect that various combinations of sex hormones produce hyperplasias of these glands in animals (rats), together with

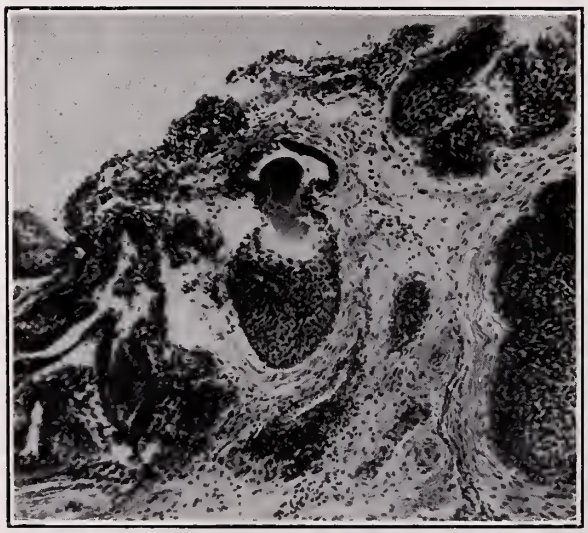

FIG. 6. Section of the urethra of a white woman, age 77. The small glands contained two or more brownish masses of secretion.

marked increase in secretion produced by the glands. These changes resulted from injections of androsterone and its various derivatives given alone or combined with estrone.

The pathologic importance of these urethral glands must constitute subsequent studies. At present, the author wishes only to state that the increasing consideration of functional disturbances and pathologic changes in the female urethra constitutes a distinct advance in urology.

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ABSTRACT OF DISCUSSION

Dr. Harry M. Spence, Dallas: There has been a lively discussion in the urological literature of the last few years as to the occurrence and pathological importance of glands in the posterior female urethra. It seems to me this clear-cut histological presentation by Dr. Caldwell unequivocally settles the point as to their existence.

Furthermore, while Dr. Caldwell did not stress the point, numerous of the slides shown by him demonstrate the overgrowth and proliferation of the cells of the urethral mucosa. It seems to me this explains why in treating cases of severe and intractable granular urethritis the urologist must lightly but thoroughly fulgurate the entire diseased areas of mucous membrane to obtain permanent clinical relief and satisfactory urethroscopic visual appearance. We have advocated this method empirically for some time and now have a rational basis for it.

Dr Caldwell (closing): The author has attempted to avoid all argumentative phases of the problem here presented, with the sole purpose of emphasizing the occurrence of glands in the posterior female urethra, and demonstrating their anatomic structure. The clinical importance of these glands can only be established by means of additional observations and careful study.

Whether these rudimentary structures harbor infective agents frequently or even occasionally cannot be stated with certainty, and to what extent their size and their secretory activity are modified by varying hormone concentrations is equally uncertain.

Chemical stimulation from substances present in the urine may well be responsible for hyperplasia of the lining epithelium and the formation of papillary projections into the lumen of the posterior urethra. Mechanical factors may play a part in their formation as on other mucous surfaces.

The established facts that these glands are present from an early stage in embryonic life and are at first indistinguishable from the corresponding structures representing the prostate in male embryos, that they are nearly constantly present in females, throughout all of life, and that they are demonstrably present in various species of lower animals, especially well known in rats and rabbits, taken together with their characteristic structure and secretion, all point to their homologous relationship to the prostate gland of males.

CORRECT DIAGNOSIS OF HERNIA IMPORTANT IN DRAFTED MEN

Pointing out that the presence of a hernia in men of selective service age is a deterrent to military service, Stephen A. Zieman, M. D., Chicago, declares in *The Journal of the American Medical Association* for Nov. 30 that the widespread prevalence of this condition in men of this age group necessitates a correct understanding on the part of the physician as to what constitutes a hernia.

Dr. Zieman says that an impulse perceptible on coughing or straining while the examining finger of a physician is in the external inguinal ring (a ringlike structure formed in the groin by firm bands of fiber) cannot be safely accepted as diagnostic of a hernia. He believes that the placing of the first, second and third fingers over the inguinal (groin) region in such a manner that the index finger rests on the so-called weak spot is a more effective diagnostic method and is particularly helpful in borderline cases. Findings at the operating table have shown the method to be effective, he says. He also declares that straining is a better method for eliciting the essential diagnostic factor than is coughing.

TREATMENT OF CHRONIC INFECTIOUS SINUSITIS*

HARRIS HOSEN, M. D.
AND
FURMAN TYNER, M. D.
PORT ARTHUR, TEXAS

The normal sinus is sterile. If the mucous membrane of a sinus is infected there is either an active clinical sinusitis or a latent sinusitis. As a rule a latent sinusitis eventually becomes active.

To effect a cure in a sinus infection a sterile condition must be obtained. A clinical cure is effected when the washings are negative macroscopically, which means free of visible pus or mucopus. This type of cure is temporary and recurrences soon occur. A bacteriological cure is permanent and to obtain this state the washings from the sinus must be negative microscopically, which means free of bacteria. This freedom of bacteria denotes sterility.

The purpose of this presentation is to demonstrate a technique of treatment for chronic sinusitis with the primary aim of obtaining a bacteriological cure, which gives a permanent cure.

The cardinal rule of surgery is open drainage where pus exists. This rule is as applicable to the sinuses as to any other part of the anatomy. The basis of our treatment of chronic sinusitis is open drainage combined with the use of autogenous vaccine.

Our plan of therapy covers a period of three months:

(1) Naso-antral puncture with irrigation is done at weekly intervals up to six weeks. If pus still exists in spite of six antral irrigations a permanent window is indicated. This is an unusual necessity.

(2) Autogenous vaccine injections are given every three to five days for fifteen doses.

A naso-antral puncture can be performed under local anesthesia with 5 per cent butyn in the average child over six years of age. Evipal intravenously is ideal for children over 5 years, who will not tolerate the local procedure. For younger children a light ether anesthetic is reliable, while under an anesthetic the use of an antral rasp to enlarge the antral opening is advisable. But it must be remembered that such an opening will usually close in about two weeks.

At the end of a full course of treatment the antrum is again irrigated and the washings examined. If the washings are negative macroscopically, they are centrifuged and the sediment is examined microscopically. Methylene blue stain is used. If no bacteria are found the case is considered bacteriologically cured.

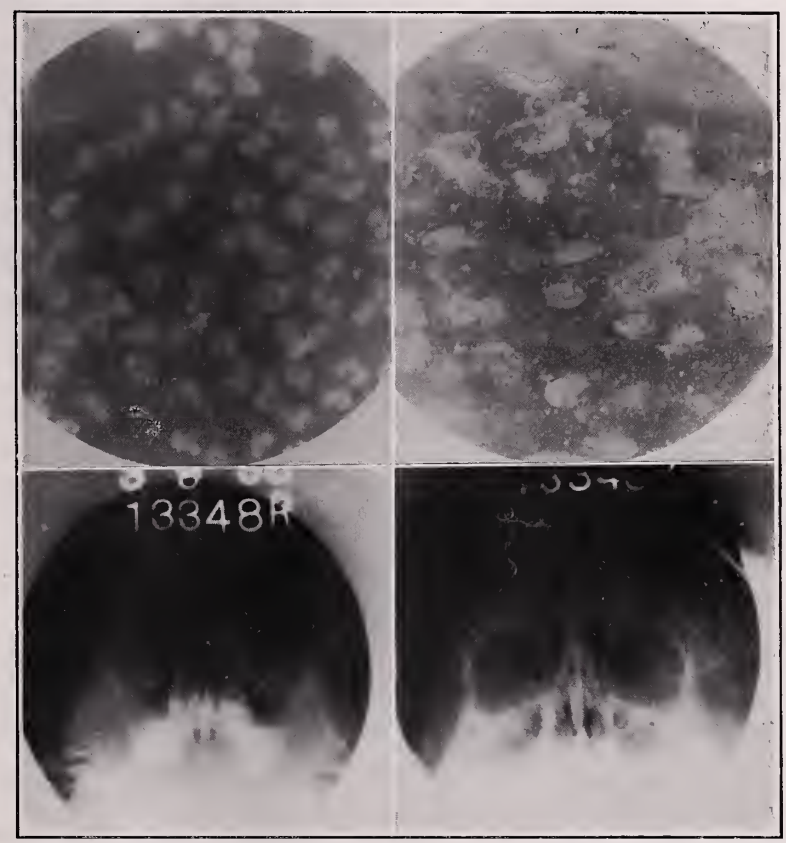


FIG. 1. Upper, left, nasal smear showing neutrophiles indicating an infectious condition. Upper, right, nasal smear showing eosinophiles indicating an allergic condition.

(Case 1) Below, left, roentgenogram of a patient with a mild catarrhal sinusitis following a grippal infection, manifested by low grade fever and some nasal congestion. Bilateral catarrhal sinusitis is present.

Below, right, roentgenogram, same case, after treatment with nasal sprays and several injections of a stock vaccine. The maxillary sinuses are negative, indicating a cure roentgenographically.

If bacteria are present in moderate abundance the patient is given a three months rest. After this rest the antral washings are again examined. If frank pus is present a second course of treatment is given. If there is no pus but bacteria are still present, a second course of vaccine alone is given. A third course of treatment is rarely needed.

*Read before the Section on Medicine and Pediatrics, State Medical Association of Texas, Dallas, May 14, 1940.

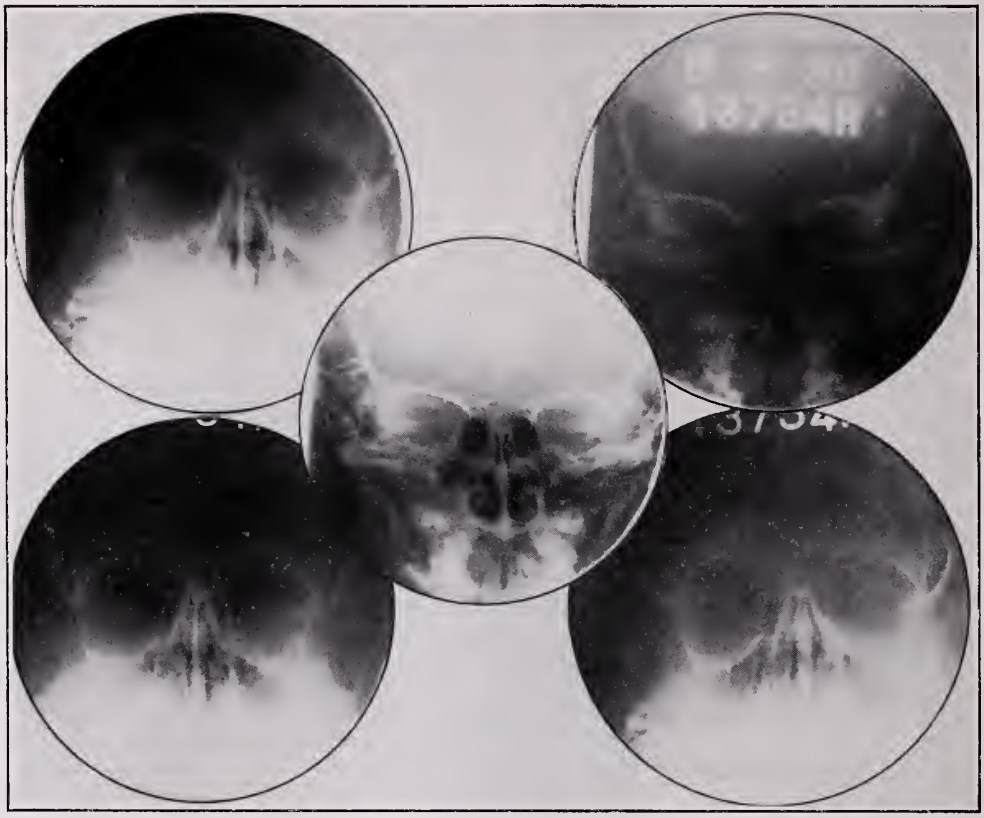


FIG. 2. (Case 3) Roentgenograms showing successive stages in a case of unilateral pansinusitis with involvement of the left maxillary (upper left) posterior ethmoids and sphenoid sinuses (upper right). The left maxillary antrum was irrigated on five weekly occasions and autogenous vaccine therapy instituted. X-ray study after treatment showed roentgen cure of the posterior ethmoid and sphenoid sinuses (center), but an opaque maxillary sinus (lower left). Six months later, without further therapy the maxillary sinus is normal (lower right).

Both the laity and medical profession often look with suspicion upon surgical treatment of sinusitis due to the universally poor results found in general. This failure of therapy can be attributed to the fact that surgical procedures are often used on allergic sinusitis. Surgery is contraindicated in pure allergic conditions for it usually aggravates and rarely helps the situation. Surgery is indicated in chronic infectious sinusitis.

The differentiation between allergic and infectious sinusitis can be made by a proper study of the cytology. Eosinophiles are typical of allergy while a predominance of neutrophiles indicates infection. In cases of acute infection eosinophiles may be present in non-allergic individuals, mixed with neutrophiles in the resolution stage of infection.

FIG. 3. (Case 4) Roentgenograms in a case of left maxillary sinusitis and diseased tonsils of two years' duration. After the tonsils and adenoids were removed and a course of vaccine therapy was given, symptoms persisted. Treatment by vaccine plus open drainage was followed by clinical cure and roentgen findings. The roentgenograms (Fig. 3) show the course of the infection and the result of treatment, the left and center roentgenograms showing maxillary sinusitis and the roentgenogram on the right showing normal maxillary sinuses.

Follow-up smears will show a gradual disappearance of the eosinophiles in favor of the neutrophiles in non-allergic cases. In the allergic cases the neutrophiles will disappear in favor of the eosinophiles. If both neutrophiles and eosinophiles persist, it shows the presence of allergy and a complicating chronic infection. Figure 1 (upper) displays microphotographs presented to show eosinophiles and neutrophiles.

CASE REPORTS

CASE 1. The patient in this case, aged 5 years, had a mild catarrhal sinusitis following a grippal infection, manifested by a low grade fever and some nasal congestion. This type of case responds to the use of stock or autogenous vaccine, nasal sprays, and even patient neglect. Open drainage is not indicated. If results are not obtained quickly it means that suppuration has occurred which indicates open drainage. This patient received treatment consisting of a nasal spray plus several injections of a stock vaccine. Roentgenograms (Fig. 1, lower) are presented before and after treatment indicating a roentgen cure.

CASE 2. The patient in this case, aged 2 months, had a fulminating type of sinusitis manifested by a marked production of pus with osteomyelitis of the bony walls of the maxillary sinuses. The patient, probably infected at birth, had had evidence of an active sinusitis since the age of two weeks, manifested by a swelling of the right eye, bilateral nasal discharge and discharge of pus from the floor of the right maxillary sinus into the mouth. Despite the age factor, sinusitis with an active and rapid accumulation of pus should be treated by continuous open drainage. Simple antral puncture and irrigation give little relief, for a reaccumulation of pus occurs soon after such a procedure.

Under ether anesthesia, bilateral naso-antral punctures were made and enlarged by the use of an antral rasp. Vaccine therapy was then instituted. Drainage was excellent and the patient improved immediately. After one month the patient was clinically cured. Three months later the antra were irrigated three more times and a second course of vaccine was given. At the end of treatment examination of the washings showed a complete freedom of bacteria, which means that a bacteriological cure was obtained. A second roentgenogram made several months later still showed opaque antra probably due to extensive bone involvement. In time this condition will gradually resolve.

CASE 3. This case of a patient, aged 7 years, represents a unilateral pansinusitis showing involvement of the left maxillary, posterior ethmoids and sphenoid sinuses (Fig. 2, upper). In the majority of pediatric cases the maxillary sinuses are usually involved but not infrequently the other sinuses become concomitantly infected. Adequate treatment of the maxillary sinuses will usually effect a cure not only of the maxillary sinuses but of the other sinuses. The left maxillary antrum was irrigated on five weekly occasions and autogenous vaccine therapy instituted. At the end of treatment the washings of the maxillary sinus were free of bacteria or sterile. The patient was both clinically and bacteriologically cured.

An x-ray study after treatment (Fig. 2, center) showed a roentgen cure of the posterior ethmoid and sphenoid sinuses, but the maxillary sinus was opaque.

An opaque sinus in the absence of clinical symptoms indicates one of two conditions: (1) a latent sinusitis; (2) a thickened membrane which has persisted in spite of freedom of infection. This hypertrophy of the sinus membrane usually assumes a state of normalcy if sufficient time is allowed to elapse after a bacteriological cure is effected.

A roentgenogram made six months later, without further therapy showed a normal maxillary sinus (Fig. 2, lower right).

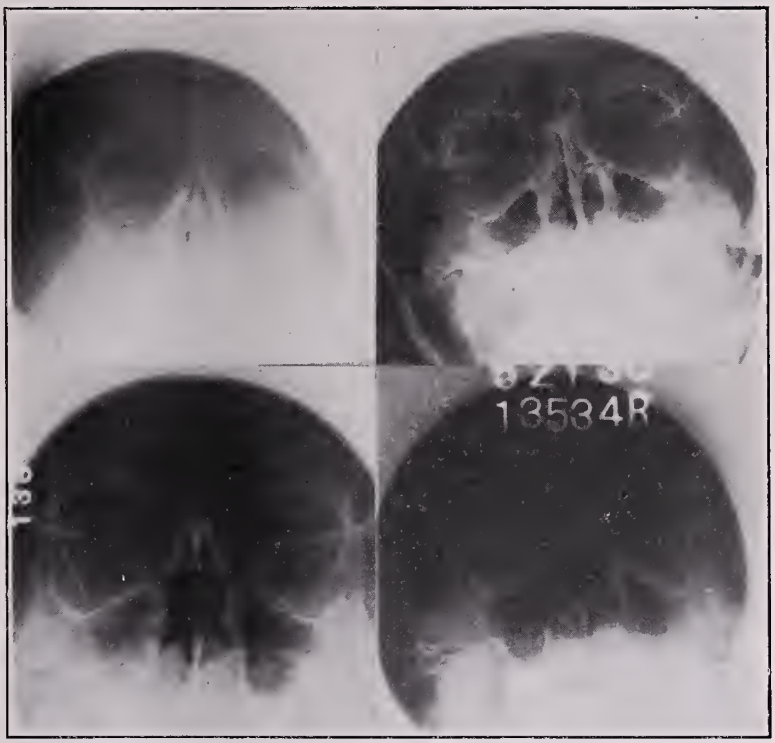


FIG. 4. (Upper, Case 6) Roentgenograms before and after treatment in a case of maxillary sinusitis with chronic tonsillitis of six years' duration. Treatment consisted of open drainage plus vaccine therapy. Two courses of therapy were required for relief.

(Lower, Case 7) Roentgenograms in a case of allergic sinusitis. No relief was secured in this case after numerous antral irrigations. After a study of the cytology revealing a true allergic condition and specific treatment, a clinical cure was effected and supported by roentgen findings as shown in the lower right roentgenogram with normal maxillary sinuses.

CASE 4. The patient in this case was 3 years of age. Chronic sinusitis is rarely if ever cured by tonsillectomy. The majority of our cases of chronic sinusitis have had this operation without relief. This patient had a left maxillary sinusitis and diseased tonsils of two years' duration. The tonsils and adenoids were removed and a course of vaccine therapy was given but the symptoms persisted. A roentgenogram made three months later showed an advance of the sinus infection from a left to a bilateral maxillary sinusitis.

Treatment by vaccine plus open drainage was then instituted. A bacteriological as well as clinical cure

was obtained. A roentgenogram following this therapy was made and it showed evidence of a roentgen cure. Roentgenograms are presented in Figure 3 to show the course of infection and the results of treatment.

CASE 5. The patient in this case, aged 10 years, had chronic sinusitis of six years duration. The tonsils and adenoids had been removed three years previously without relief, as far as the sinusitis was concerned.

Six bilateral naso-antral irrigations were performed and autogenous vaccine was given over a period of three months. A clinical cure was achieved. Examination at the end of treatment showed a bacteriological cure. An x-ray examination at this time revealed a normal right maxillary sinus but an opaque left maxillary sinus.

This opacity was due to a thickened non-infected membrane as evidenced by sterile washings. Six months later without further therapy a roentgenogram showed complete resolution of the hypertrophied membrane.

CASE 6. The patient in this case, aged 11, had a chronic tonsillitis and sinusitis of six years' duration. The tonsils and adenoids were removed following which open drainage plus vaccine therapy was instituted.

A clinical cure was obtained, but at the end of the course of treatment the antral washings were macroscopically negative but microscopically many colonies of bacteria were present. The patient did well for three months when active symptoms returned. Antral irrigations at this time showed frank pus. A second course of treatment consisting of weekly antral irrigations for six weeks plus vaccine therapy was instituted. At the end of the second course of therapy a clinical and bacteriological cure was effected.

Roentgenograms before and after treatment are presented in the upper part of Figure 4.

The following case illustrates the importance of differentiating between allergic and non-allergic sinusitis.

CASE 7. This patient suffered from severe headaches with marked nasal congestion. A number of roentgen studies showed a persistent right maxillary sinusitis. (Fig. 4, lower left). Numerous antral irrigations were made but no relief was experienced. A radical antral operation was suggested but the patient refused to undergo such a procedure. A study of the cytology revealed a true allergic condition.

A second roentgenogram several months after specific treatment was started showed normal maxillary sinuses (Fig. 4, lower right). The opaque sinus in this case was due to an allergic edema which disappeared with allergic therapy.

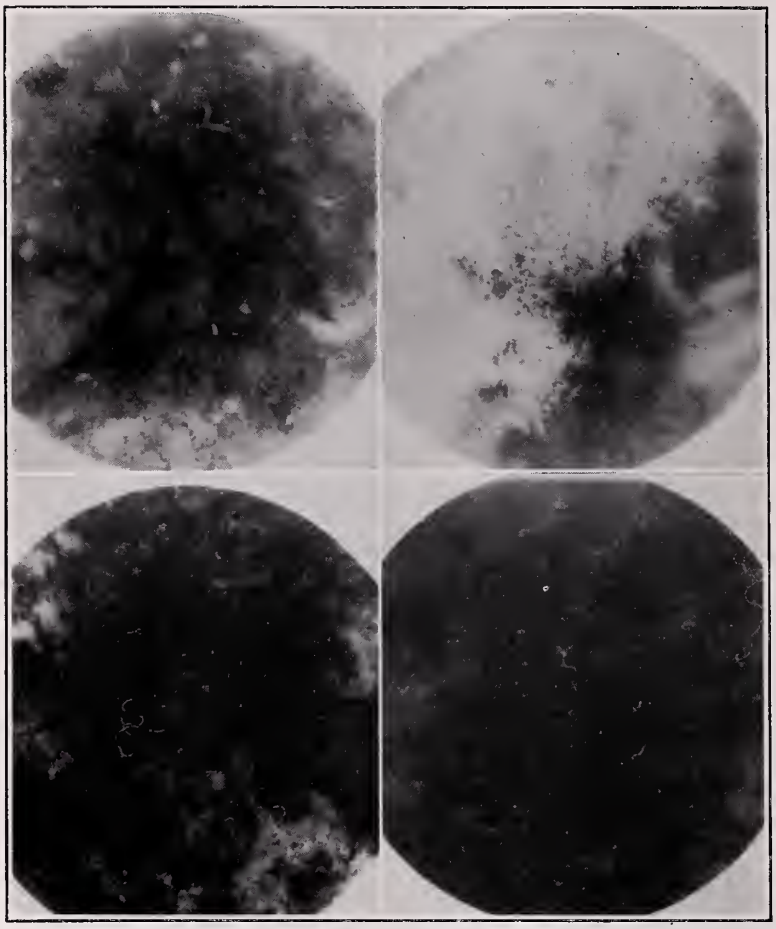


FIG. 5. Microphotographs in a case of chronic sinusitis, showing the progression from a state of clinical cure to a bacteriologic cure. The upper left microphotograph was made from the sediments of sinus washings which were grossly free of any pus. The upper right, lower left and lower right microphotographs were made successively at ten-day intervals.

The microphotographs shown in Figure 5 trace an actual case of chronic sinusitis from a state of clinical cure to a bacteriological cure. The first microphotograph was made from the sediment of sinus washings which was grossly free of any pus. Marked evidence of a latent infection is shown. Active treatment was continued. The progress of this latent infection to a complete bacteriological cure is photographically shown by the subsequent microphotographs. These studies were made at ten day intervals.

A bacteriological cure is the ultimate aim of proper sinus therapy.

416 Adams Building.

ABSTRACT OF DISCUSSION

Dr. Guy A. Tittle, Dallas: It will be noted that Dr. Hosen's discussion emphasises clearly the bacteriological angle of chronic sinusitis. According to Brennemann, the bacteriological angle is practically the only angle to the disease. All sinusitis, truly speaking, is due to infection. Broadly speaking this infection has only two underlying etiological factors. My remarks will be limited to the following phases of the subject: (1) invasion of the paranasal sinuses with a virulent bacteria; (2) stasis of the postnasal space followed by, in all instances, an invasion with bacteria.

Under the first heading let me state that the virulent bacteria may attack the nasal mucosa directly and by sub-epithelial extension involve the paranasal sinuses or possibly more commonly the invasion begins in diseased tonsils and adenoids.

Under the heading of postnasal stasis we have four outstanding etiological factors: (1) congenital atresia of the post-nares—considered by many authorities a result of vitamin deficiency in the mother; (2) adenoids, and let me emphasize the importance of adenoids for I agree with most authorities that here is the most common predisposing factor to paranasal sinusitis in children; (3) foreign body in the postnasal space; (4) and, lastly, polypoid growths and allergy; I couple these because allergy may block the postnasal drainage either by causing a spongy swelling of the mucosa or in the more chronic forms the allergy results in polypoid blocking.

In the opinion of most authorities the care of the last named type of cases lies in determining the allergic factor and the treatment directed accordingly. This fact has been clearly presented by Dr. Hosen. For that matter no sinus infection is permanently cured unless and until all predisposing factors are removed. I wish to highly compliment Drs. Hosen and Tyner's splendid presentation and to further emphasize the extreme importance of this very common problem in pediatrics.

Dr. Ralph Bowen, Houston: Some few weeks ago this same paper was presented in Houston. At that time, as today, it was claimed a sinus infection should be treated by multiple puncturing, frequent washings, and vaccine administration. It was also proposed that the allergic child be given house dust antigen, and in the main, that food sensitivities could be ignored. It was also claimed, in a letter, that 90 per cent of all such cases were being cured. How can one used the word cure, when we are dealing with a hereditary tendency? As for the respiratory group, no one has as yet given us a permanent answer.

Psychologically I can think of no procedure more traumatizing or barbaric to a child than puncturing and washing sinuses each week for two or three months. I certainly would not do it to my own children.

The essayists claim sterility of sinus washings from centrifuging and sedimentation studies. I still believe sterility can only be substantiated by culture. The essayists emphasize what to do to the antra. But how do they help the ethmoid, sphenoid group?

To me this approach may have an occasional place, but I plead for a more conservative view. This same concept, such as proposed by the essayists, I entertained twelve years ago, but I was forced to discard it as a radical procedure.

The allergic sinus case as mentioned by the essayists can be recognized by eosinophilia study of the smears, and thickened mucoperiosteal membrane demonstrated by roentgenogram. Clinically, these same children confirm such a diagnosis by being morning sneezers, mouth twisters, and nose rubbers which has been labelled the "Allergic Salute." We must also remember that infection and allergy frequently co-exist. However, radicalism in the hands of such men as Hansel has only been necessary fourteen times in 384 patients. Let us treat all children as we would treat our own children.

Dr. Hosen (closing): I wish to thank Dr. Tittle and Dr. Bowen for their frank remarks on this subject.

When we pediatricians face the issue and realize the prevalence of chronic sinusitis in adults who go through life with much suffering in spite of radical operations, we will realize the great responsibility in our hands. A large percentage of adults with chronic sinusitis have had this condition since childhood. Proper therapy in childhood will probably eliminate most of the intractable sinusitis we see today. The treatment procedure recommended is not brutal but very simple and painless when done properly without a great deal of fanfare. The sinus of a child and that of an adult are different for the child's sinuses have thin walls which are easily pierced with little or no pain and in our experience with no psychological trauma. A child with a chronic sinusitis has a hypertrophied membrane which can be returned to a normal state with proper therapy, but after many years this stage of hypertrophy attains that of metaplasia. When such occurs the only hope of again attaining a normal membrane is through extreme, radical procedures.

Dr. Bowen asked about treatment of sphenoid and ethmoid sinusitis. I refer him to Case 3 in the paper. When the maxillary sinuses are treated, little alarm need be felt for the other sinuses for their ostia have a dependent position for drainage which occurs readily when the primary infection of the maxillary sinus is cleared. This paper deals with chronic infectious sinusitis, and we have found a great majority of such cases amenable to a cure.

MISCELLANEOUS

COMING MEETINGS AND CLINICS

State Medical Association of Texas, Fort Worth, May 12-15, 1941. Dr. Preston Hunt, Texarkana, President; Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth, Secretary.

American Medical Association, Cleveland, June 2-6, 1941. Dr. Nathan B. Van Etten, New York, President; Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Southern Medical Association. Dr. Arthur T. McCormack, Louisville, Kentucky, President C. P. Loranz, Empire Building, Birmingham, Alabama, Secretary-Manager.

Texas Allergy Association, Fort Worth, May 12, 1941. Dr. Boen Swinny, Medical Arts Building, San Antonio, President; Dr. Homer Prince, Medical Arts Building, Houston, Secretary.

Texas Ophthalmological and Otolaryngological Society, San Antonio, 1941. Dr. E. L. Goar, Houston, President; Dr. Dan Brannin, Medical Arts Building, Dallas, Secretary.

Texas Radiological Society, Sherman, January 18, 1941. Dr. C. F. Crain, Corpus Christi, President; Dr. L. W. Baird, Temple, Secretary.

Texas Club of Internists, Houston, February 14 and 15, 1941. Dr. Carl Lovelace, Waco, President; Dr. George Herrmann, Medical College, Galveston, Secretary.

Texas Association of Obstetricians and Gynecologists, Galveston, 1941. Dr. Roy Grogan, Fort Worth, President; Dr. Julius McIver, 1314 Medical Arts Building, Dallas, Secretary.

Texas Pediatric Society, Fort Worth, May 14, 1941. Dr. C. P. Jasperson, Corpus Christi, President; Dr. Frank Lancaster, 4409 Fannin Street, Houston, Secretary.

Texas Neurological Society, Fort Worth, May 12, 1941. Dr. Wilmer Allison, Fort Worth, President; Dr. Melbourne J. Cooper, Nix Professional Building, San Antonio, Secretary.

Texas Railway and Traumatic Surgical Association, Fort Worth, May 12, 1941. Dr. J. D. Becton, Greenville, President; Dr. Ross Trigg, First National Bank Building, Fort Worth, Secretary.

Texas State Pathological Society, Dallas, Jan. 26, 1941. Dr. Geo. T. Caldwell, Dallas, President; Dr. M. D. Bell, 1109 Medical Arts Building, Dallas, Secretary.

Texas State Heart Association, Fort Worth, May 12, 1941. Dr. Joseph Kopecky, San Antonio, President; Dr. V. E. Schulze, San Angelo, Secretary.

Texas Dermatological Society, Fort Worth, May 12, 1941. Dr. W. A. Smith, Beaumont, President; Dr. Duncan O. Poth, 1230 Nix Professional Building, San Antonio, Secretary.

Texas Surgical Society, Temple, April 7 and 8, 1941. Dr. W. L. Crosthwait, Waco, President; Dr. Walter Stuck, 1426 Nix Professional Building, San Antonio, Secretary.

Texas Orthopedic Society, Fort Worth, May 12, 1941. Dr. W. B. Carrell, Dallas, President; Dr. Ruth Jackson, Medical Arts Building, Dallas, Secretary.

Texas Association of Medical Anesthetists, Fort Worth, May 12, 1941. Dr. Thomas H. Compere, Houston, President; Dr. R. A. Miller, 1415 Nix Professional Building, San Antonio, Secretary.

Texas Society of Gastro-enterologists and Proctologists, Fort Worth, May 12, 1941. Dr. M. O. Rouse, Dallas, President; Dr. Tom E. Smith, 1207 Medical Arts Building, Dallas, Secretary.

Texas Mental Hygiene Association, San Antonio, February, 1941. Dr. Paul White, Austin, President; Dr. Evelyn M. Carrington, Huntsville, Secretary.

Texas Tuberculosis Association, San Antonio, May 5-8, 1941. Dr. E. G. Faber, Tyler, President; J. W. Butler, Galveston, Secretary.

Texas Public Health Association, Corpus Christi, 1941. Dr. George A. Gray, Sweetwater, President; Mr. Alan C. Love, Austin, Travis County Health Unit, Austin, Secretary.

Second District Medical Society. Dr. W. V. Ramsey, Abilene, President; Dr. W. T. Sadler, Merkel, Secretary.

Third, Panhandle, District Medical Society, Amarillo, April 8 and 9, 1941. Dr. F. A. White, Childress, President; Dr. H. H. Latson, 301 Polk St., Amarillo, Secretary.

Fourth District Medical Society, San Angelo, October, 1941. Dr. O. H. Chandler, Ballinger, President; Dr. F. T. McIntire, San Angelo, Secretary.

Fifth and Sixth, Southwest District Society, Laredo, 1941. Dr. T. E. Christian, San Antonio, President; Dr. W. W. Bondurant, Jr., 1512 Nix Professional Building, San Antonio, Secretary.

Seventh, Austin District, Austin, February 11, 1941. Dr. Joe A. Shepperd, Burnet, President; Dr. A. L. Nanny, Marble Falls, Secretary.

Eighth, Ninth and Tenth District Medical Society. Dr. Walter D. Brown, Beaumont, President; Dr. A. A. Ledbetter, Medical Arts Building, Houston, Secretary.

Eleventh District Society, Tyler, 1941. Dr. Clayton Shirley, Tyler, President; Dr. C. C. McDonald, Tyler, Secretary.

Twelfth, Central Texas District Society, Waco, Jan. 14, 1941. Dr. Dan Warren, Waco, President; Dr. R. K. Harlan, Temple, Secretary.

Thirteenth, Northwestern District Society, Bowie, March 11, 1941. Dr. J. Edward Johnson, Mineral Wells, President; Dr. Charles H. McCollum, Jr., 210 Mid-Continent Building, Fort Worth, Secretary.

Fourteenth District Society, Sulphur Springs, 1941. Dr. Ira L. Thomas, Gainesville, President; Dr. R. S. Usry, 1835 Garrett, Dallas, Secretary.

Fifteenth, Northeast District Society, Longview, October 14, 1941. Dr. Hugh M. Ragland, Gilmer, President; Dr. J. N. White, Texarkana, Secretary.

CLINICS

Dallas Southern Clinical Society Conference, Dallas, March 17-20, 1941. Dr. Everett C. Fox, Medical Arts Bldg., Dallas, President; Dr. C. H. Warren, 1133 Medical Arts Bldg., Dallas, Secretary.

International Post-Graduate Medical Assembly of Southwest Texas, San Antonio, January 28, 29, and 30, 1941. Dr. J. Layton Cochran, 1126 Medical Arts Building, San Antonio, President; Dr. Charles L. McGehee, 723 Medical Arts Building, San Antonio, Secretary.

TEXAS CLUB OF INTERNISTS MEETING

The Texas Club of Internists will meet February 14 and 15, in Houston, informs Dr. Frederick R. Lummis, secretary. In addition to a scientific program, a dinner will be given the evening of February 14, honoring Dr. N. D. Buie of Marlin, in celebration of his election to the office of President-elect of the State Medical Association. Dr. Buie is a member of the Texas Club of Internists.

MEDICAL EDUCATION CONGRESS DATE SET

The Thirty-Seventh Annual Congress on Medical Education and Licensure, conducted under the auspices of the Council on Medical Education and Hospitals of the American Medical Association, will be held at the Palmer House, Chicago, Feb. 17 and 18, *The Journal* of the Association announces in its Nov. 9 issue. During the Congress special consideration will be given to the relationship of the medical profession to national defense.

WARNING

By letter of date December 18, 1940, T. A. Phillips, Sales Manager, J. B. Lippincott Company, Publishers, advises that the subscription price of the *Digest of Treatment* is $5.00 per year, and that no person has authority to contract a new subscription or renew an existing one on any other terms. Physicians should keep this fact in mind for their own protection.

NORTHEAST TEXAS POSTGRADUATE ASSEMBLY

The Northeast Texas District Medical Society held its first Postgraduate Assembly December 5, 1940, at Marshall, with an attendance of sixty-one physicians from the Fifteenth district, surrounding counties, and Shreveport, Louisiana. The following scientific program was presented by members of the teaching staff of Baylor University College of Medicine, Dallas:

Pneumonia—W. G. Reddick, M. D., Professor of Clinical Medicine.

Infections of the Hand—C. B. Carter, M. D., Associate Professor of Clinical Surgery.

Fractures—Sim Driver, M. D., Associate Professor of Orthopedic Surgery.

Medical Ophthalmology—L. H. Quinn, M. D., Associate Professor of Clinical Ophthalmology.

Coronary Occlusion—H. W. Winans, M. D., Professor of Medicine.

Management of Pruritis Ani—Curtice Rosser, M. D., Professor of Proctology.

The Use of the X-ray in the Clinical Examination of the Chest—A. E. Seeds, M. D., Associate Professor of Radiology.

Conduct of Normal Delivery—C. R. Hannah, M. D., Professor of Obstetrics.

Everyday Pediatric Problems—H. Leslie Moore, M. D., Professor of Pediatrics.

Pyelitis in Children—A. I. Folsom, M. D., Professor of Urology.

A roundtable discussion was held at luncheon, with Dr. C. A. Smith, Texarkana, Councilor of the Fifteenth District, as toastmaster.

A dinner was held at the Hotel Marshall in the evening, with Dr. H. M. Ragland, Gilmer, as toastmaster. Guest speakers at the dinner were Dr. W. H. Moursund, Dallas, Dean, Baylor University, College of Medicine; Dr. Preston Hunt, Texarkana, President of the State Medical Association, and Dr. N. D. Buie, Marlin, President-elect of the State Medical Association.

Scientific addresses were made following the dinner by Dr. Guy F. Witt, Dallas, Professor of Neuropsychiatry, on the subject, "Human Nature Reactions;" and Dr. H. M. Winans, Dallas, Professor of Medicine, on the subject, "Anemia."

TEXAS RADIOLOGICAL SOCIETY MEETING

The Texas Radiological Society will hold its twenty-seventh annual meeting January 18, in the Grayson Hotel, Sherman. The meeting will be known as the "McDeed Memorial" meeting.

Dr. C. P. Harris, Houston, will deliver the McDeed Memorial address.

Dr. C. F. Crain, Corpus Christi, will deliver a presidential address on the subject, "X-Ray Therapy in Allergic States."

The following scientific program will be carried out:

10:00 a. m.	The Utility of Radiological Methods in Gastro-intestinal Diagnosis—Fred J. Hodges, M. D., Professor of Radiology, University of Michigan, Ann Arbor, Michigan.
10:45 a. m.	General discussion.
11:00 a. m.	Diagnostic Problems Encountered in Carcinoma of Cervix, with Method of Treatment and End Results—Wendell Long, M. D., Oklahoma City, Oklahoma.
11:30 a. m.	General discussion.
11:45 a. m.	Irradiation in Endocrine Dysfunction, Particularly Hyperthyroidism—Leon J. Menville, M. D., President-elect, Radiological Society of North America, New Orleans, Louisiana.
12:15 p. m.	General discussion.
2:20 p. m.	Evaluation of Radiation Methods Now Available for the Treatment of Cancer—J. R. Maxfield, Jr., M. D., Albuquerque, New Mexico.
2:50 p. m.	General discussion.
3:05 p. m.	Fracture of the Dorsal Spine Following Metrazol Therapy—R. P. O'Bannon, M. D., Fort Worth, Texas.
3:35 p. m.	General discussion.
3:50 p. m.	Scoliosis—Paul C. Williams, M. D., Dallas, Texas.
4:20 p. m.	General discussion.
4:35 p. m.	X-ray Manifestations in Nutritional Deficiencies of Bone—J. B. Johnson, M. D., Professor of Radiology, University of Texas, Galveston, Texas.
5:05 p. m.	General discussion.
5:20 p. m.	Presentation of "Problem" Cases. (Any one having a difficult but instructive case is urged to bring films and brief of all pertinent findings for general discussion at this time. This may be made a very interesting feature of the meeting.)

The Society will hold an executive session following the luncheon hour.

The annual dinner will be held in the evening, at which time President Crain will make remarks and Dr. Fred J. Hodges, Ann Arbor, Michigan, will be the principal speaker. Dr. Hodges' subject will be "The Cyclotron as a Medical Instrument."

BRITAIN TO LICENSE U. S. PHYSICIANS

Canadian and United States physicians are being licensed by Great Britain for the duration of the war, the regular London, England, correspondent of *The Journal of the American Medical Association* reports in the Dec. 14 issue.

"The government has made an order under the Emergency Powers Act, passed for the purposes of the war, enabling the General Medical Council to register for the period of the emergency Canadian and United States physicians," he reports. "They will thus be able to join the Emergency Medical Service with the same privileges as British physicians. Previously we have never had medical reciprocity with the United States."

MEDICAL SERVICE FOR THE NATIONAL YOUTH ADMINISTRATION IN TEXAS

Mr. J. C. Kellam, Director of the National Youth Administration in Texas, and Dr. G. F. Thornhill, its Medical Consultant, met with the Council on Medical Economics at Dallas on November 10, 1940, and requested the coöperation of the State Medical Association of Texas in the distribution of medical service to the youth employees of the Administration. The eligibility requirements for youths employed by the National Youth Administration in the out of school work experience program, are that they must be between the ages of 17 to 24 years inclusive, out of school, unemployed, in need of assistance available only through the National Youth Administration and unable to obtain that assistance elsewhere. A survey of these youth employees of the National Youth Administration made within the past 60 days showed that they are from families consisting of five or more members with an income for the entire family averaging less than $750.00 per annum.

The National Youth Administration has approximately 400 local projects in the State with about 11,000 youth employees and 75 residence centers employing about 4,000. These activities are in some 150 communities in various sections of the State. There are approximately 15,000 youth employees at any one time with an annual turnover reaching 30,000.

In order to secure an adequate medical service for those in need the following Agreement is proposed:

AGREEMENT

1. This Agreement is applicable only to the youth employees actually in attendance in the non-scholastic section of the National Youth Administration. Hereinafter the word youth employee designates those in such status. The terms of service and remuneration agreed to by the National Youth Administration and the State Medical Association of Texas shall not be changed without the written consent of both.

2. Negotiation for the formation and administration of a medical service for the benefit of youth employees in the various counties in which National Youth Administration projects may be located shall be carried on by the National Youth Administration with the County Medical Society having jurisdiction over physicians in the respective counties.

3. Each youth employee or his parent shall have the right of choice among those physicians taking part in the medical service developed locally. In the event that the youth employee or his parent decline to make a choice, the National Youth Administration may select a physician in rotation among those participating. In those communities in which the number of participating physicians may exceed 10, the County Medical Society shall from time to time designate by name 10 participating physicians to whom this rule of rotation shall apply. A physician shall have the right to participate in this service or not as he wishes. A participating physician may refuse to accept a particular youth employee as a patient without prejudice to the physician.

4. The local County Medical Society will furnish the Medical Consultant of the National Youth Administration with a Roster of Physicians who have agreed to participate in this medical service. The local Supervisor of the National Youth Administration will advise the youth employee of the names of physicians participating in this service. The local Supervisors in the larger communities shall not confuse the Roster of Physicians participating in the service with that of the list of physicians to be called in rotation. Each youth employee calling on a physician for professional service shall be furnished a letter, card or introduction identifying him with the National Youth Administration.

5. The compensation to the participating physician shall, in principle, be his average remuneration for a similar service usually received in private practice from patients in average financial condition in the locality in which the physician resides. Compensation to every employee of the National Youth Administration is under legal limitations on the basis of a rate per diem or per hour. In order to provide for varying contingencies, the compensation may be for a regular service or a special service. Regular compensation or that for regular service shall be based on the unit of compensation. Special compensation or that for special service shall be provided by a retainer fee. A reasonable retainer fee based on the unit of compensation shall be paid for scheduled services with an allowance for additional compensation for extra service, as it may be called for, beyond that covered in the scheduled service. The unit of compensation now is $21.00 per diem of 7 hours or $3.00 per hour. A memorandum on the unit of compensation varying with the cost of living and its application shall be agreed to each year by the State Medical Association of Texas and the National Youth Administration in Texas.

6. The physicians participating in this medical service will be expected to render such professional services in their line of work as may be requested by the National Youth Administration or the youth employees. The Regular Service shall consist of office visits, residence calls either at the patient's house or at the National Youth Administration residence centers, hospital calls, operations and laboratory service. The Special Service on a retainer fee shall be explicit in type of scheduled service desired: the time of day, the number of hours per diem, and the day or days of the week such service shall be rendered with an allowance for additional compensation for extra service beyond that covered in the scheduled service.

7. The National Youth Administration will pay for professional service rendered within 30 days after the bill for the same is presented by the participating physician. The National Youth Administration further agrees to pay for professional service within its legal limitations in a continuous illness or disability for a reasonable length of time after a youth employee is no longer employed by the National Youth Administration. In the event that the appropriation for this service is exhausted, the participating physicians shall be so advised forthwith. The National Youth Administration agrees to make no appeal to the County Medical Societies or the participating physicians for a reduction of remuneration.

8. It shall be recognized by both the National Youth Administration and the State Medical Association of Texas that funds available for this medical service may not be sufficient for the remuneration of the quality and quantity of service desired—particularly if an epidemic should occur. The National Youth Administration agrees to advise the Secretary of the State Medical Association of Texas 30 days or more prior to the anticipated date of the exhaustion of funds appropriated for this service. In this connection, the National Youth Administration agrees that no appeal to the State Medical Association of Texas for reduction in remuneration to the participating physician will be asked for.

9. Controversies regarding any phase of the medical service shall be referred to the local County Medical Society for adjudication. Questions that cannot be settled locally shall be referred to the State Medical Association of Texas for reference to the proper authority in the Association.

10. The State Medical Association of Texas and National Youth Administration shall exchange information and suggestions as deemed advisable to better the medical service and its administration.

THE COUNCIL ON MEDICAL ECONOMICS
CLAUDE C. CODY, *Chairman*
W. F. STARLEY
C. C. FOSTER
W. C. TENERY
T. B. BOND

ACCEPTED:

THE STATE MEDICAL ASSOCIATION OF TEXAS
PRESTON HUNT, *President*
HOLMAN TAYLOR, *Secretary*
M. L. WILBANKS, *Chairman, Board of Councilors*
NATIONAL YOUTH ADMINISTRATION IN TEXAS
J. C. KELLAM, *Director*
G. F. THORNHILL, *Medical Consultant*
November, 1940

EXERCISE WON'T PREVENT DOUBLE CHINS

Exercises for the neck and throat, frequently advocated by "beauty" articles, cannot prevent double chins, *Hygeia, The Health Magazine* replies in answer to an inquiry.

"If a person grossly overeats so that he accumulates masses of fat, exercise cannot keep up with the process of fat storage," *Hygeia* states. "Furthermore, there is no evidence that the amount of exercise which one would take by contraction of the muscles of the neck would have any local effect. Even the constant activity of the abdominal muscles in respiration, twelve to fifteen times a minute at least, throughout hours. days, weeks and years, does not prevent the development of immense masses of fat between the abdominal muscles and the skin."

EXPOSURE TO LOW OXYGEN ENVIRONMENTS

The possibility that repeated exposures to environments low in oxygen, such as encountered by aviators flying at high altitudes, may damage the nerve cells of the brain and gradually lower the brain's reserve power, leading eventually to mental conditions comparable to those of the "punch-drunk" boxer, is suggested by investigations reported in *The Journal of the American Medical Association* for Nov. 9 by Melvin W. Thorner, M. D., Randolph Field, Texas, and F. H. Lewy, M. D., Philadelphia.

Their studies show that exposures to total lack of oxygen for periods too short to cause death lead to degenerative changes in the brains of guinea pigs and cats. "Because of quantitative differences in the extent of anoxia (oxygen deficiency) and the differences in species," they say, "these investigations cannot be translated directly to situations of oxygen deficit in man. Yet they indicate that exposure to anoxia of increasing duration or repetition is followed by graded severity of damage to the nerve cells in brain and brain stem."

LIBRARY NOTES

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Requests for packages should be addressed "Library, State Medical Association of Texas, 1404 W. El Paso Street, Fort Worth, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Only one package may be borrowed at a time, and packages are allowed to remain in the hands of the borrower for 14 days.

Package Service

Packages were mailed to the following from the Library of the State Medical Association during December:

Baylor Medical Library, Dallas—(4 journals).

Dr. S. K. Stroud, Corpus Christi—*Pneumonia, therapy* (19 articles).

Dr. S. L. Witcher, Clifton—*Spine, intervertebral disks* (20 articles); *Anesthesia, intravenous* (10 articles.

Dr. David M. Marcley, Amarillo—*Sclerosis, disseminated* (12 articles).

Dr. A. H. Daniell, Brownfield—*Tularemia, therapy* (14 articles).

Dr. Howard O. Smith, Marlin—*Obesity, therapy* (10 articles); *Gas* (8 articles).

Dr. Thos. M. Johnson, Del Rio—*Medicine, socialized* (17 articles).

Dr. F. A. White, Childress—*Amebiasis, therapy* (21 articles).

Dr. C. H. Frank, Texarkana—*Deglutition, disorders* (10 articles).

Dr. A. J. Jinkins, Galveston—*Trichomoniasis* (8 articles).

Dr. S. L. Blum, Beaumont—*Sciatica, therapy* (12 articles).

Dr. M. H. Moore, Tyler—*Hermaphroditism* (20 articles).

Dr. T. Hyde, Wichita Falls—*Anus, diseases* (10 articles).

Dr. J. H. Caton, Eastland—*Medicine, socialized* (9 articles).

Dr. G. E. Glover, Austwell—*Cancer, metastasis* (6 articles).

Dr. G. T. Vinyard, Amarillo—(1 journal).

Drs. Baze & Huff, Mason—*Pylorus, hypertrophy and stenosis* (15 articles).

Dr. Robert F. Thompson, El Paso—*Pregnancy, kidney complications* (20 articles).

Dr. Heinrich Lamm, La Feria—(1 book).

Dr. J. G. Rodarte, Temple—*Purpura, hemorrhagica* (3 articles).

Dr. Jesson L. Stowe, El Paso—*Pelvis, measurement* (15 articles).

Dr. J. D. Becton, Greenville—*Gallbladder, diseases* (18 articles).

Dr. A. C. Rogers, Vernon—*Thrombo-Angiitis, obliterans* (25 articles).

Dr. W. R. McCuistion, Fort Worth—*Blood Transfusion, preserved blood* (3 articles).

Dr. O. F. Schoenvogel, Brenham—(1 journal).

Dr. G. V. Pazdral, Somerville—*Ear, diseases* (10 articles).

Dr. Perry R. Jeter, Childress—*Medicine, socialized* (12 articles).

Dr. Chas. A. Smith, Texarkana—*Intestines, obstruction* (22 articles).

Dr. J. H. Kreimeyer, Houston—*Migraine* (10 articles).

Dr. E. H. Caldwell, Tyler—*Pain, therapy* (9 articles).
Dr. T. E. Fuller, Texarkana—(1 journal).
Dr. W. E. Ryan, Midland—*Fractures, therapy* (4 articles).
Dr. Wm. R. Klingensmith, Amarillo—(2 journals).
Dr. Kurt Lekisch, Midland—*Varicose Veins* (25 articles).
Dr. W. R. Houston, Austin—*Leukocytes, count* (3 articles).
Dr. A. G. Barsh, Stephenville—*Mental Hygiene* (9 articles).
Dr. A. C. Hornbeck, Marlin—*Osteomyelitis* (26 articles).
Dr. Emerson M. Blake, Lubbock—*Respiratory Tract, diseases* (14 articles).

ACCESSIONS

C. V. Mosby Company, St. Louis—Crossen & Crossen: Foreign Bodies Left in the Abdomen; Clendening & Hashinger: Methods of Treatment, 7th edition; Harris: Clinical Pellagra.

SUMMARY

Reprints received, 1,019.	Local users, 46.
Journals received, 154.	Borrowers by mail, 38.
Items consulted, 96.	Packages mailed out, 40.
Items taken out, 104.	Items mailed out, 459.

Total items consulted and loaned, 659.

Editor's Note.—A series of such articles as the following, because of their pungency, simplicity of style, obviously prepared for lay consumption, was recently released to the lay press of the State, and widely published. They are being reproduced in the Journal as examples of what can be done to inform the public on important health problems. We are indebted to the San Antonio *Express* for invaluable aid in this particular campaign.

LEAVE 'EM WHERE THEY LIE

PREAMBLE

Series of Instructions on First Aid Following Injuries on the Highway—Leave 'Em Where They Lie.

You, Mr. John Public, have, through the press and other sources of general information, been told many things and been taught much about public health, about contagious diseases and their prevention, about tuberculosis and cancer.

You have learned much in the prevention of disease, in how reasonably to take care of yourself and your family when trouble threatens or arrives.

You have been taught that wounds may become infected and to go to your doctor early; you have been taught that a broken bone must be set; but you have not been taught what to do and why in the case of injury and emergency on the highways, where there is no one to whom to turn and you only have your own knowledge and ability to take care of such emergencies yourself.

The series of articles on the subject of highway accidents, describing each one in turn and telling you in each instance what and what not to do, is being published for your information, only to help you help yourself or someone else—your wife, your mother, your child, your neighbor—in such an emergency when the difference between saving life or limb depends upon doing the proper thing at the right time. A single act, wisely done, is better than a hundred acts hurriedly done without reason.

Why are you told to "leave 'em lie?"

Because unless you have been taught what to do, you will do much more harm than good; because excitement, hurry, improper handling, which often complicates matters seriously and rushing to a hospital or doctor increases shock tremendously and costs many lives.

Have the doctor or ambulance come to you and save lives.

Write to this newspaper about any questions which you do not understand.

(Prepared by the Fracture Committee, Texas State Medical Association; sponsored by Texas State Highway Department and Texas Public Safety Commission.)

NEWS

New Medical Clinic Building for Beaumont.—A new medical clinic building constructed at a cost of about $35,000 has just been completed in Beaumont and will provide clinical facilities for Drs. John A. Hart, R. B. Stevens, and J. Fertitta, for whom it was built. The building and equipment is modern and complete in every respect.—*Beaumont Enterprise.*

Mental Health and Guidance Conference.—Dr. D. B. Harmon of the Texas State Department of Health, conducted a mental health and guidance conference for teachers and students in the public schools of Lubbock from December 2 to December 13, inclusive, advises the Lubbock *Avalanche.* Dr. Harmon gave several lectures to the teachers as a group and then visited the various schools, for a period of one half day each, to consult with teachers and give them instruction in the work of mental health and guidance. The conference stressed the preventive aspects of guidance work. Practical demonstrations were given by Dr. Harmon, with assistants from the State Health Department, for the teachers.

Tarrant County Doctors and Dentists Entertained.—About 300 members of the Tarrant County Medical and Dental Societies were guests of Renfro Drug Company November 14, at Colonial Club at an annual party conducted by this company for the doctors and dentists. The guests included doctors and dentists from Fort Worth, Mineral Wells, Decatur, Weatherford and Cleburne, in which the twenty-four Renfro stores are operated. Other guests included internes of Fort Worth hospitals and doctors from Hicks Field. A buffet dinner was served and music was provided by the Texonians.—*Fort Worth Star Telegram.*

The State Medical Association Committee on Venereal Disease Control met November 6, at the Hotel Texas, with the following members present: Dr. S. J. R. Murchison, Fort Worth, Chairman; Drs. J. Stewart Cooper, Abilene; J. Manning Venable, San Antonio; Thomas M. Jarmon, Tyler; and A. M. Clarkson. Austin, ex-officio member from the State Health Department. Dr. Holman Taylor and Dr. R. B. Anderson, Fort Worth, Secretary and Assistant Secretary of the State Medical Association, respectively, were present by invitation.

Various matters of policy relating to the venereal disease control program in Texas were discussed.

The committee deferred action regarding the dissemination of birth control information in venereal disease treatment centers at the present time.

The committee discussed extensively coördination of civilian and military activities in the control of venereal disease in areas of Texas where troops are now being concentrated.

The committee recommended increased activity in combating the infection of gonorrhea in the established venereal disease clinics throughout Texas.

Bexar County Tuberculosis Hospital Bond Issue Passage Celebrated.—A victory dinner celebrating passage of a $285,000 bond issue providing for the erection of a county tuberculosis hospital in San An-

tonio was sponsored November 15, by the San Antonio Junior Chamber of Commerce in the Menger Hotel and attended by 150 men and women, including many representatives of professional, business and public life in that city.

Speakers at the dinner included Dr. C. J. Koerth, who pointed out that the erection of the hospital is only a small part of the task of controlling tuberculosis in the community, and that the treatment program of the hospital must be supplemented by an adequate case-finding program which will be carried out by the nurses division of the city health department. Patients released from the institution after treatment will be followed up periodically to prevent recurrence of the disease. Education is a vital part of the program and a challenge to the schools of San Antonio to conduct a hygiene campaign against communicable diseases, stated Dr. Koerth.

Other speakers included County Judge Charles Anderson; Dr. C. E. Scull, a member of the San Antonio board of health; Jake Tiner, president of the Junior Chamber of Commerce, who presided; Dr. Herbert Hill, president of the Bexar County Medical Society; Dr. W. A. King, city health officer; George Craze, executive secretary of the Bexar County Tuberculosis Association; Dr. Dudley Jackson; Alonzo Perales and Rabbi Ephraim Frisch. A prepared address of Mayor Maury Maverick, who was scheduled to deliver the principal address was read in his enforced absence on account of a conflicting engagement.—*San Antonio Light.*

Medical Aid to Britain.—Members of the medical profession of Dallas are taking an inventory of their offices and collecting all surgical instruments, samples of medicine, etc., to be sent to a central office in New York for transport to hospitals in Great Britain. This activity is being supervised by a local committee of the Medical and Surgical Supply Committee of America, the movement being a nationwide one. The local committee, who will collect the materials to forward to the national office, which is affiliated with the American Red Cross, is composed of the following Dallas physicians: Drs. D. W. Carter, Jr., R. B. McBride, George L. Carlisle, H. W. Cochran, Charles W. Flynn, Jo Alexander and J. L. Goforth.

The A. P. Cary Company, surgical instrument supply company, Dallas, has volunteered to wrap and mail packages when equipment is turned in.—*Dallas News.*

Houston Public Health Institute.—The first annual Public Health Institute of Houston was held December 2, at the Rice Hotel. Dr. Walter A. Coole of Houston was general chairman. The following program was carried out:

Resume of Houston Social Public Health Agencies—M. J. Meynier, Jr., M. D., Chairman of the Health Council of Social Agencies.
Present Status of City Health Department—John M. Trible, M. D.
The Automobile as a Killer—Thomas E. Willier, Traffic Engineer of Houston.
Gonorrhea and Syphilis as a Major Problem—Austin E. Hill, M. D., Assistant Director of Public Health of Houston.
The Dental Situation—Frederick C. Elliott, D. D., Dean, Texas Dental College.
Trends in School Health Education—Allen C. Hutcheson, Director of Hygiene, Houston Public Schools.
The Public Health Aspect of Industrial Hygiene—Herbert F. Poyner, M. D.
Family Physician and Public Health—E. W. Bertner, M. D., Past President of the State Medical Association of Texas.
Integration of Mental Health and Public Health Program—J. P. Moloy, M. D., Director, Bureau of Mental Hygiene.
Trends in Public Health—A. M. Dashiell, M. D., Field Director of Maternal and Child Health, Texas State Board of Health.
The Tuberculosis Problem—Elva A. Wright, M. D., President, Houston Anti-Tuberculosis League.

The American Academy of Dermatology and Syphilology held its third annual meeting at the Palmer House, Chicago, December 8, 9, 10 and 11. More than sixty lectures were presented. Sessions were in the form of symposia. Special lectures in courses of one to four hours each were given. There were numerous luncheon round table discussions, and clinical presentations were conducted at the University of Illinois Medical School in Chicago.

Actual cases of rare dermatoses and of other important skin diseases were presented at the University of Illinois Medical School December 9, by a number of leading dermatologists from various parts of the country. These clinical presentations were arranged so that visiting dermatologists and syphilologists could attend several different presentations during the afternoon. Discussion of rare dermatoses was resumed in the Palmer House that evening.

The annual banquet was held December 10.

Annual Congress On Industrial Health.—The third annual congress on industrial health will be held January 13-14, at the Palmer House, Chicago, under the sponsorship of the Council on Industrial Health of the American Medical Association. Many phases of industrial health will be discussed by authoritative speakers. Subjects of symposia, under each of which there will be several papers, are hand injuries, availability of trained health personnel, acute respiratory disease in industry, and industrial ophthalmology. Clinics and demonstrations in industrial medicine, hygiene and traumatic surgery arranged by the Chicago Medical Society; a clinic and symposium on industrial dermatosis at the University of Illinois College of Medicine, and a symposium on occupational diseases are other features of the program. On the evening of the first day an informal dinner and round table discussion intended primarily for state and county medical society committees on industrial health will be held in the Crystal Room of the Palmer House. The subject matter for discussion and this occasion will include problems of organization and plans for future activity.

Pan American Congress of Ophthalmology Organized.—On October 11-12, in Cleveland, the Pan American Congress of Ophthalmology was organized at the first meeting of the congress, under the auspices of the American Academy of Ophthalmology and Otolaryngology. Eighteen delegates rpresenting governments, universities, hospitals, and medical societies in Brazil, Chile, Costa Rica, Cuba, Colombia, Guatemala, Panama and Puerto Rico attended the congress. An extensive program of scientific papers was presented, about equally divided between English on one hand and Spanish and Portugese on the other. The language difficulty was overcome successfully by the use of slides projecting extensive summaries of the papers in the different languages.

Officers of the Congress elected were Dr. Harry S. Gradle, Chicago, president; Dr. Conrad Berens, New York, and Dr. Moacyr E. Alvaro, Sao Paulo, Brazil, executive secretaries.

Essay Contest.—The Mississippi Valley Medical Society is again offering its annual cash prize of $100, a gold medal and a certificate of award for the best unpublished essay on any subject of general medical interest, including medical economics, and of practical value to the general practitioner of medicine. Certificates of merit may also be granted to the physicians whose essays are rated second and third best. Contestants must be members of the American Medical Association who are residents of the United States. The winner will be invited to present his contribution before the next annual meeting of the Mississippi Valley Medical Society at Cedar Rapids, Iowa, October 1, 2, 3, 1941, the Society reserving the exclusive right to first publish the essay in its official publication—the *Mississippi Valley Medical Journal* (incorporating the *Radiologic Review*). All contributions shall not exceed 5000 words, be typewritten in English in manuscript form, submitted in five copies and must be received

not later than May 1, 1941. Any physician interested in competing should communicate with Harold Swanberg, M. D., Secretary, Mississippi Valley Medical Society, 209-224 W. C. U. Building, Quincy, Illinois.

Personals

Dr. George W. Cox, Austin, was unanimously reappointed State Health Officer by the State Board of Health at a recent meeting. Dr. Cox is the first health officer to be elected for three consecutive two-year terms.—*Fort Worth Star-Telegram.*

Dr. J. W. Giessel, Eagle Lake, took postgraduate work recently in surgery in the Cook County Hospital, Chicago, informs the Eagle Lake *Headlight.*

Dr. H. G. Swepston, Rosebud, has returned from two months postgraduate study at the New York Polyclinic Hospital, advises the Rosebud *News.* Mrs. Swepston accompanied Dr. Swepston to New York.

Dr. G. W. Dawson, Dalhart, received two broken ribs November 23, in an automobile accident caused by icy pavement.—*Dalhart Texan.*

Dr. A. G. Barsh, Stephenville, has returned from one month's postgraduate study at Stanford University, San Francisco.—*Stephenville Empire-Tribune.*

Dr. E. L. Burton, McKinney, has returned from three weeks' postgraduate study in New Orleans and New York.—*McKinney Examiner.*

Dr. Henry R. Hoskins, San Antonio, was recently designated technical advisor and *Dr. S. L. Boccelato*, San Antonio, was appointed case finding physician, by the Bexar County board of health, acting on a recommendation of *Dr. John H. Burleson*, chairman of the board. The two physicians will devote their time exclusively to tuberculosis work in Bexar County. Dr. Boccelato, when finding cases will give instructions in isolation, thus preventing spread of the disease and will institute such treatment as necessary. Dr. Hoskins as technical adviser will make the rounds at the tuberculosis colony at Southton, will recommend such surgical procedure as necessary, and interpret roentgenograms of tuberculous patients at the Robert B. Green Hospital.—*San Antonio Express.*

Dr. Leonard A. Scheele, of the National Cancer Institute, addressed an audience at the Driskill Hotel, Austin, under the sponsorship of the Women's Field Army for Cancer Control. Dr. Scheele was introduced by Dr. George W. Cox, State Health Officer. Dr. Scheele serves as consultant in cancer control throughout the various states, helping in the development of cancer control programs. He is also studying tumor clinics and hospitals to which radium has been loaned for cancer work. Dr. Scheele went from Austin to Baylor University Hospital, Dallas, and from there will go to El Paso, where he will study the cancer control work at the City-County Hospital.—*Austin Statesman.*

Dr. Harold M. Williams. Fort Worth, is acting director of the health and welfare department of the City of Fort Worth, which office he will hold during the year's absence of *Dr. Burke Brewster*, now stationed at Camp Brownwood. Dr. Williams has been city epidemiologist since 1935. Dr. Williams has selected *Dr. R. B. Wolford*, Midland county health officer, to succeed him as city epidemiologist of Fort Worth.—*Fort Worth Press.*

Dr. C. R. Yerwood, Austin, Secretary of the Lone Star State Medical, Dental and Pharmaceutical Association, the recognized Negro state medical organization in Texas, died December 19, 1940.

Marriages

Dr. Leon Kopecky to Dr. Ina Moody Calhoun, both of San Antonio, November 5, 1940.

Dr. Robert F. Gossett of San Antonio to Miss Ann Donnell, June 19, 1940.

Dr. Phillip Magrish of San Antonio to Miss Edith Stone, September 5, 1940.

Births

To Dr. and Mrs. Wood H. Bruder, Houston, a daughter, Virginia Louise, September 7, 1940.

To Dr. and Mrs. Stephen A. Foote, Houston, a son, Stephen A., Jr., October 28, 1940.

To Dr. and Mrs. John Roberts Phillips, Houston, a son, John Roberts, Jr., October 20, 1940.

To Dr. and Mrs. R. C. Jordan, San Antonio, a daughter, Velma Jane Jordan, December 7, 1940.

To Dr. and Mrs. E. T. Coates, San Antonio, a daughter, Amanda, August 12, 1940.

To Dr. and Mrs. W. McCurdy, San Antonio, a daughter, Sue Ayers, August 7, 1940.

To Dr. and Mrs. August F. Herff, San Antonio, a son, Ferdinand Peter, August 12, 1940.

To Dr. and Mrs. Romie Dufner, San Antonio, a son, Romie Mark II, July 24, 1940.

To Dr. and Mrs. E. A. Cayo, San Antonio, a daughter, Catherine Carroll, July 7, 1940.

To Dr. and Mrs. E. W. Weatherford, San Antonio, a daughter, Sally Ann, May 1, 1940.

To Dr. and Mrs. J. B. Miller, Jr., San Antonio, a son, William Robert, October 13, 1940.

To Dr. and Mrs. Edwin L. Mueller, San Antonio, a son, William, May 16, 1940.

To Dr. and Mrs. R. S. Sutton, San Antonio, a daughter, Mary Letitia, October 13, 1940.

To Dr. and Mrs. Kennedy Milburn, San Antonio, a daughter, Mollie, November 29, 1940.

To Dr. and Mrs. D. J. Wible, Houston, a boy, Dowd Jordan, II, November 14, 1940.

To Dr. and Mrs. George F. Mood, Houston, a daughter, Katherine Ainslee, December 8, 1940.

To Dr. and Mrs. Donald Slaughter, Dallas, a daughter, Caro Olive, October 27, 1940.

To Dr. and Mrs. Sidney Galt, Dallas, a daughter, Cynthia, October 19.

To Dr. and Mrs. Wallace Wilkinson, Dallas, a daughter, Peggy Jo, October 8.

To Dr. and Mrs. Howard Shane, Dallas, a son, Michael Dixon, November 4, 1940.

To Dr. and Mrs. Robert Shaw, Dallas, a daughter, Jean Elizabeth, November 19, 1940.

To Dr. and Mrs. Ridings Lee, Dallas, a daughter, Linda Kay, December 5, 1940.

To Dr. and Mrs. Porter K. Mason, Dallas, a daughter, Portia Jean, December 12, 1940.

SOCIETY NEWS

Anderson-Houston-Leon Counties Society

December 3, 1940

(Reported by Leroy Trice, Secretary)

Hypertension—Merritt B. Whitten, Dallas.
Pneumonia—Hubert F. Hawkins, Dallas.

Anderson-Houston-Leon Counties Medical Society met December 3, and the scientific program as given above was carried out.

New Officers.—The following officers were elected for 1941: President, Leroy Trice, Palestine; vice-president, Paul B. Stokes, Crockett; secretary-treasurer, John H. Barrett, Palestine; new member, board of censors, Sam Kennedy, Grapeland; delegate, Henry R. Link, Palestine; and alternate delegate, A. D. Wages, Palestine.

Bexar County Society

October 17, 1940

(Reported by W. W. Bondurant, Jr., Secretary)

Shock—Major S. F. Seeley, M. C., U. S. Army, Fort Sam Houston Station Hospital.

Bexar County Medical Society met October 17, in the Medical Library Building, San Antonio, with sixty-five members and ten visitors present. Herbert Hill, president, presided, and J. A. McIntosh, chair-

man for the scientific program of the evening, asked Peter M. Keating to introduce Colonel James A. Bethea and Major Sam F. Seeley of Fort Sam Houston Station Hospital.

SHOCK (S. F. Seeley).—Various theories of shock were presented, as advanced by different writers, as follows: (1) damage to the central nervous system, exhaustion of nerve centers and peripheral vascular dilatation, Crile; (2) acapnea, Henderson; (3) fat embolism, Porter; (4) cardiac failure, Boynton; (5) inhibition, Howell; suprarenal exhaustion, Sweet, which theory can be discarded; (7) toxic therapy, Cannon and Bayliss (histamine has been thought to be the cause but other investigators have not found histamine in the blood, so it is possibly a histamine-like substance); (8) loss of blood, Parsons. In connection with the last named theory, from 50 to 60 per cent of the circulatory volume of blood must be reduced to produce shock.

A gradual increase in the pulse rate is the first sign of shock in cases of hemorrhage; the low blood pressure comes much later; the pulse pressure gradually decreases. Blood loss results in oligemia, which in turn eventuates in decreased cardiac output, low blood pressure, anoxemia and, later still, generalized capillary damage. Intravenous saline helps before the final change referred to occurs. Acacia solution intravenously helps some in the later stage, but after a certain period the condition of shock becomes irreversible. Plasma loss results in a concentration of red blood cells. In traumatic injury, with hemorrhage, there is plasma loss without resultant red blood cell concentration.

The treatment of shock in hemorrhage consists of replacement of the loss with whole blood. Sodium amytal and nembutal administration help to protect capillary permeability and prevent or delay shock. In traumatized experimental animals under ether anesthesia, shock developed in three hours fifty-two minutes; when amytal was used with the ether, its development was delayed to eleven hours and twenty-three minutes; when nembutal was used its development was delayed to twelve hours and ten minutes.

The paper was discussed by Lloyd I. Ross, Col. James A. Bethea, George H. Geyer, J. A. Watts, L. B. Jackson, C. W. Tennison and Thomas W. Folbre.

New Member.—Charles H. Mims was elected to membership on application.

President Hill introduced Captain Allen of the San Antonio police force, who discussed the subject of traffic violations. Captain Allen stated that it is the policy of the San Antonio police department to permit physicians to go on emergency calls at a necessary rate of speed, but he urged safety in driving. Doctors on emergency calls are immune from using parking meters. He urged that physicians park in loading zones only as a last resort and pointed out that the red zone is a dangerous spot in which to park. Parking on the wrong side of the street is also dangerous and a bad practice. If a patient is detained too long in a doctor's office he will be excused for overparking if he presents a note from his doctor stating that the delay was necessary. The rates of speed permitted in the city of San Antonio were stated. Doctors will be allowed to pass through parades, who have the proper tags on their cars for emergency calls. Firemen do not always coöperate.

October 24, 1940

Shortening of the Femur (motion picture)—E. A. Cayo, San Antonio.

Bexar County Medical Society met October 24, in the Medical Library Building, San Antonio, with Robert E. Parrish, vice-president, presiding. T. E. Christian, chairman for the evening, presented the scientific program as given above.

SHORTENING OF THE FEMUR (E. A. Cayo).—Dr. Cayo exhibited a motion picture illustrating shortening of an unaffected femur to make it the same length as its fellow femur, the head and neck of which had been previously destroyed by disease, but with a good functioning joint. The technic of overlapping or wedging and splicing the approximated ends of the cut femur was shown. The Cayo power instrument is of great value in adding to the speed and accuracy of bone surgery. The correction of a severe case of bow legs by fracture and alignment of the bones was shown. The Cayo instrument and original splints and extensions were exhibited.

Walter G. Stuck, in discussing the presentation, stated that the saw was a very ingenius one and made possible excellent work. It is very difficult and dangerous to lengthen an extremity; the shortening process is much simpler. Dr. Stuck uses bone plates and sometimes bone grafts.

R. H. Crockett stated that he had seen three cases of overgrowth of one extremity from overabundant blood supply.

T. E. Christian stated that Dr. Cayo's saw shortens the operating time a great deal; with it four bones have been fractured in four hours and fifteen minutes, practically a world's record.

New Members.—G. W. Hudson and E. G. Reuter were elected to membership on application, and the following intern members were elected on application: Ruth Schlecte, Marvin Schlecte, Jack Partain, A. Fletcher Clark, Jr., and J. W. Carter, Jr.

A leave of absence was granted Gardner D. Phelps for 1941.

October 31, 1940

External Biliary Fistula Following Injury of the Bile Ducts; Comparison of Therapeutic Methods Based on Personal Experiences (lantern slides)—John G. Burns, Cuero.

Trichomonas Infestations of the Male and Female, and Their Pathological Significance (motion picture)—Harry McC. Johnson, San Antonio.

Bexar County Medical Society met October 31, at San Antonio, with sixty members and four visitors present. Herbert Hill, president, presided, and Stanley Whitacre, chairman for the evening, presented the scientific program as given above.

EXTERNAL BILIARY FISTULA FOLLOWING INJURY OF THE BILE DUCTS (John G. Burns).—Accidental cutting of the major bile ducts is a major tragedy. In 250 operations on the bile tract this accident had occurred once with a fatality. There are two methods of repair: (1) anastomosis of the bile duct to the stomach or intestine, or (2) to create another duct from other tissue. Two cases were reported, the first represented employment of the first method of treatment named, with successful results for fifteen months so far. In the second case, an external fistulous tract was dissected out, cut off, and introduced over a tube into the stomach wall to which it was already adherent. The patient in this case did well for one year, but the tube passed by rectum and there were then recurrent attacks of jaundice, chills and fever, death occurring in the fourth postoperative year. Intermittent obstruction of the fistulous tract must have caused the symptoms given. The second method of treatment is less satisfactory than the first named.

W. B. Russ complimented the essayist on a well presented paper. He cautioned against too great haste in gallbladder surgery. He stated that in five cases he had had to use the gallbladder to make the necessary anastomosis. In one of the cases of duct anastomosis the patient died on the fourth postoperative day. Fistulous tracts are poor substitutes for bile ducts.

J. W. Nixon pointed out that most of the patients in these cases are not in good condition and that administration of vitamin K, glucose and blood will be helpful. If bile is being lost it should be collected

and given to the patient in capsules or through a nasal tube. In operating, structures must be identified. A small hypodermic needle is useful in identifying the bile passages, and the ducts must be freed so that there will be no tension on them. The ducts should be sutured so that they will hold water. Babcock advocates stainless, annealed, steel wire, which does not cause calculous incrustation in the urinary bladder and probably will not have a tendency to cause gallstones. Dr. Nixon exhibited lantern slides showing anomalies of bile ducts. He stated that in the next case he has he will remove the gastric contents with a Wangensteen tube and feed the patient through a jejunostomy. The aspirated gastric contents and other necessary food may thus be given as needed for several weeks.

O. J. Potthast stated that, in these cases, he has used a T tube and left it in for weeks and months. If a bile duct is severed, connection with the duodenum should be made; a stomach-jejunum short circuit helps to prevent ascending infection.

Dr. Burns, in closing, stressed that the use of rubber tubing is important; some tubes have remained in place fifteen years.

TRICHOMONAS INFESTATION OF THE MALE AND FEMALE AND THEIR PATHOLOGICAL SIGNIFICANCE (Harry McC. Johnson).—In a series of 722 cases, protozoan infestation was found in 159 instances, 124 of which occurred in females. Trichomonads are pathogenic as are Giardia intestinalis and Balantidium coli. The trichomonads can gain entrance into the bladder as a result of a stagnant ureter, from intercourse, and other ways. Eighty-seven of 122 patients with trichomonas infection had normal stools. Entamoeba were found in a number of stools. Serious conditions may develop as a result of trichomonas infestation, such as pellagra, impotency, painful coitus, sterility, bladder neck stricture, and so forth.

With regard to treatment, perseverance is an important factor. Cures will rarely be secured by the use of douches. Suppositories, tampons and tablets used locally are not very efficacious. Scrubbing the affected region with green soap is brutal. Insufflation medication by a physician is too expensive so that the patient should be taught to do insufflations on herself. Powders used for this purpose are of two types, one containing arsenic and the other phenols. The arsenicals are more efficacious but arsenical reactions may occur. Coccal infections should be treated with 30 gr. of sulfanilamide by mouth, each day, for several days. The urine should be made acid. All the therapeutic measures in the armamentarium of the urologist should be used if needed. A motion picture of trichomonads was shown.

J. R. Nicholson, in discussing the paper, called attention to a small sized organism with flagella, that has a spinning motion, sometimes found in the vaginal secretion; there are found, also, a few bubbles in the vaginal secretion.

Victor C. Tucker said that he is not sure that primary trichomonas infection occurs in the colon; that it may occur in the vagina. If very many of the parasites are present they will cause symptoms. Stovarsol is more toxic than carbarsone. Pyridium has been of value in trichomonas infestation in cases of pregnant women.

E. V. DePew stated that he had used stovarsol three to four days at a time and he thinks it is best.

O. J. Potthast asserted that he had not had much trouble in clearing up trichomonas infestation. A great many cases of trichomonas infestation of the vagina come from infestation of the colon. He had milked many trichomonads out of Skene's glands; the infection there has to be cleared up; his old standby in such cases is camphophenique applied with a small silver cannula. He also uses floraquin powder with excellent results in vaginal trichomonas infection. He also uses idodine and glycerine on a tampon and the sulfates. He had cleared up every case that he had encountered.

Other Proceedings.—A letter from Col. J. W. E. H. Beck, medical officer of Selective Service, Austin, was read with regard to examination of draftees.

President Hill announced that the following physicians were appointed members of draft boards: E. P. Cayo, L. B. Jackson, J. W. Goode, R. E. Bowen, J. L. Barnett, C. B. Clifton, J. L. Cochran, Charles E. Crain, W. R. Bennett, S. Frank Gilbreath and Frank N. Haggard.

It was stated that only members of the Society would be appointed as examinees of the draft boards. Twenty-two physicians are needed for this service, for which there is no compensation. The examinations are made in the offices of doctors at their convenience and a detailed examination is not required.

A letter from the Community Chest was read and the reply to that letter from the board of directors of the Society, in which it was stated that the Bexar County Medical Society is a non-profit, strictly scientific association, and while its members are heartily in favor of the Community Chest, it is thought that their individual contributions would mean much more than a single contribution from the Society as a whole. The Society voted to approve the letter drafted by the board of directors replying to the Community Chest letter, and directed the secretary to notify the Community Chest accordingly.

New Member.—Andrew Milton Jensen was elected to membership on application. R. C. Stokes, formerly of Vernon, now stationed at Randolph Field, was elected to membership on transfer from the Wilbarger County Medical Society.

Big Bend Counties Society

December 10, 1940

(Reported by Joel Wright, Alpine, Secretary)

Renal Infections—Edmund L. Mee, San Angelo.
Pre-Malignant and Malignant Skin Lesions—Leslie Smith, El Paso.
Cancer of the Breast—Dudley Jackson, San Antonio.

Big Bend Counties Medical Society met December 10, at the Stockton Hotel, Fort Stockton, in a joint meeting with the Woman's Auxiliary to the Society, with Fort Stockton members of the Society as hosts at a dinner preceding the scientific program as given above.

The paper of Edmund L. Mee was discussed by Malone Hill, Alpine, and Captain Salyer, Fort Russell.

The paper of Leslie Smith was discussed by M. E. Barrett, Fort Stockton, and the paper of Dudley Jackson by L. A. Lavanture, Marfa, and Francis O'Neil, Sanderson.

The election of officers scheduled to be held was postponed until the January meeting.

Cherokee County Society

November 26, 1940

(Reported by Elmer Haynes, Member, Program Committee)

Common Allergic Manifestations Encountered by the General Practitioner—Wayne M. Hull, Balyeat Hay Fever and Asthma Clinic, Oklahoma City.

Cherokee County Medical Society met November 26, 1940, in Deckard's Cafe, Rusk, Texas, and the scientific program as given above was carried out.

The paper of Dr. Hull was discussed by H. P. Thomas, Rusk, and J. M. Travis, Jacksonville.

Clay-Montague-Wise County Society

October, 1940

(Reported by W. T. Inabett, Secretary)

Clay-Montague-Wise County Medical Society met October 24, at Bowie.

Mr. Boutwell of Dallas, discussed in detail the

Farm Security Administration's plan for medical care for their clients, outlining the financial procedure for the consideration of the Society. After discussion the Society voted to adopt the plan as agreed to by the State Medical Association and the Farm Security Administration.

Holman Taylor, Fort Worth, Secretary of the State Medical Association, then gave an interesting, informative talk on medical preparedness and national defense.

Collin County Society

December 10, 1940

(Reported by P. D. Robason, Secretary)

New Officers.—At a meeting of the Collin County Medical Society, December 10, the following officers were elected for the ensuing year: President, W. G. Harris, Plano; vice-president, W. Scott Wysong, Jr., McKinney; secretary-treasurer, H. Dudley Wysong, McKinney; and new member, board of censors, J. C. Erwin, Jr., McKinney.

El Paso County Society

December 9, 1940

(Reported by Jesson L. Stowe, Secretary)

Election of Officers.—El Paso County Medical Society met December 9, at the Cortez Hotel, El Paso, and elected the following officers for the ensuing year: President, Harry Varner; president-elect, F. O. Barrett; vice-president, C. W. Awe; secretary-treasurer, L. W. Breck; member board of censors, Orville Egbert.

Other officers and committees named were as follows: Librarian, M. P. Spearman; nominating committee, L. M. Smith, J. J. Gorman, and H. T. Safford, Sr.; economic committee, J. W. Laws; milk committee, A. P. Black and Harry Leigh; board of *Southwestern Medicine*, Paul Gallagher and L. O. Dutton; cancer committee, W. W. Waite.

Gonzales County Society

December 5, 1940

(Reported by George W. Wilhite, Secretary)

Gonzales County Medical Society met December 5, 1940, at the Michelson's Cafe, Gonzales, Texas, with eight members and six guests present.

New Officers.—After an oyster dinner, the following officers were elected for the ensuing year: President, N. A. Elder, Nixon; vice-president, W. A. Sievers, Gonzales; secretary-treasurer, George W. Wilhite, Gonzales; members, board of censors, John A. Maness, Gonzales, and C. C. Cogburn and H. A. Elder, Nixon; delegate, C. C. Cogburn; and alternate, W. A. Sievers.

New Member.—C. C. Cogburn was elected to membership on transfer.

Hardin-Tyler Counties Society

December 10, 1940

(Reported by Watt Barclay, Secretary)

Hardin-Tyler Counties Medical Society met December 10, at the Cariker Hotel, Kountze, with seven members present. I. R. Fowler, president, presided at a business meeting held after a dinner.

A letter was read from the director of the tuberculosis clinic advising that the date for the tuberculosis clinic will be in April, 1941; and from the committee on venereal disease of the State Medical Association, regarding venereal disease control in Texas.

J. A. Knight moved that the local health unit be authorized to make tuberculin skin tests on school children in preparation for the coming of the mobile tuberculosis unit of the State Health Department, at which time x-ray examinations will be made of all suspects. The motion was seconded by D. A. Berwick and carried.

D. A. Berwick moved that the Society approve the expenditure of funds for a floral offering sent to Dr. Pate, which motion was seconded by Alvin Waller and carried.

The Society discussed and took action regarding the venereal disease control program.

New Officers.—The following officers were elected for the ensuing year as presented by a nominating committee composed of W. H. Beasley, W. W. Anderson, and J. A. Knight: President, Watt Barclay, Woodville; vice-president, W. J. Pshataske, Silsbee; secretary, Alvin Waller, Woodville; delegate, W. W. Anderson, Kountze, and alternate delegate, W. H. Beasley, Silsbee.

Following the election I. R. Fowler was given a vote of appreciation for the splendid service rendered by him as president the past year.

Harris County Society

October 30, 1940

(Reported by Hugh C. Welsh, Secretary)

Harris County Medical Society met October 30, with forty members present. Alvis E. Greer, president, presided.

A letter from the Tri-cities Welfare League concerning the plan of their local charity clinic was read by the secretary.

B. T. Vanzant moved that the president appoint a special committee to study this plan and report at the next business meeting, which motion was seconded by W. A. Coole and carried.

C. M. Warner, reporting verbally for the board of censors, stated that members who are called to active duty, on their request, will be given a withdrawal card indicating that they are members in good standing, and when they return to civil practice, they will be eligible for membership.

The report of the legislative and public health committee was read by the secretary.

E. W. Bertner, reporting verbally for the entertainment committee, stated that arrangements had been made to entertain the Post Graduate Assembly with a stag dinner at the San Jacinto Inn the first evening of the Assembly meeting.

R. M. Hargrove, reporting verbally for the program committee, urged all members who want to present papers on the State Association annual session program, offer such papers early to the appropriate section officers.

W. A. Coole gave the report of the historical committee.

E. W. Bertner, reporting verbally for the Southern Medical Association meeting committee, stated that St. Louis also wanted the 1941 meeting, and more effort than was originally expected necessary will have to be put forth to get it for Houston.

E. W. Bertner, as representative to the Bigley Settlement House, reported that there will soon be an invitation to the Society to meet there and be shown the plan of the house.

C. C. Cody, reporting for the finance committee, stated that the Society is operating within its budget.

P. R. Stalnaker reported verbally for the committee on military affairs.

E. W. Bertner, reporting verbally for the National Physicians Committee, stated that the Committee had collected $2,315, and he thought that at least $1,000 of this amount should be retained by the Society to be used in defense of the suit brought against the Society by the Department of Justice of the United States Government, and the remainder sent to the National Physicians Committee. After discussion by B. T. Vanzant, on motion of M. D. Levy, the Society voted that the entire amount collected, $2,315, should be sent to the National Physicians Committee.

J. T. Billups gave the treasurer's report.

Alvis Greer gave the report of the coördinating committee.

B. T. Vanzant moved that the Society ratify the action of the coördinating committee and endorse all action of the board of directors of the Bureau, carried out under the authority of the Society; that if this motion prevailed, a copy of the action taken be referred to the Houston Dental Society for similar action. The motion was seconded by J. E. Hodges, and carried.

B. T. Vanzant then moved that after favorable action has been taken on the matter by the Houston Dental Society, a joint committee be appointed from the two groups on by-laws governing the bureau, the joint committee being directed to report at a joint meeting of the Society and the Houston Dental Society not later than January 20. After discussion by C. C. Cody, who seconded the motion, it was carried.

C. C. Cody moved that the Society approve the report of the coördinating committee, which motion was seconded by W. A. Coole and carried.

New Members.—W. P. Bonin, W. F. Cole, W. M. Donohue, R. A. Gardner, F. S. Glover, C. H. Hallson, E. B. Lewis, J. H. Mayfield, L. A. McRae, S. G. Ohlhausen, D. Y. Oldham, I. D. Peters, K. K. Phelps, E. S. Sears, M. F. Strashun, D. R. Swetland, G. B. Thomas and N. C. Windrow, Jr., were elected to membership on application.

Lewis Barbato, S. S. Bowen and D. L. Curb were elected to membership on transfer.

Resolutions of condolence were read and adopted on the deaths of Drs. E. N. Gray and B. B. Liles.

A. T. Talley presented amendments to the constitution and by-laws. C. C. Cody moved that the amendments be published in *Medical Records and Annals*, and that notice be published on the program cards, requesting members to read the amendments, which motion carried.

A. T. Talley made an announcement concerning medical insurance, which subject was referred to the medical economics committee.

Harrison County Society

December 10, 1940

(Reported by W. H. Bennett, Secretary)

New Officers.—At a meeting of the Harrison County Medical Society, December 10, in Marshall, the following officers were elected for the ensuing year: President, Rogers Coke; vice-president, J. B. Baldwin; secretary-treasurer, F. V. Mondrick; new member, board of censors, S. W. Tenney; delegate, W. H. Bennett; and alternate delegate, R. G. Granbery, all of Marshall.

Henderson County Society

December 2, 1940

(Reported by D. Price, Secretary)

New Officers.—At a meeting of the Henderson County Medical Society in Athens, December 2, 1940, the following officers were elected for the ensuing year: President, R. E. Henderson, Athens (re-elected); vice-president, J. K. Webster, Athens; and secretary, Don Price, Athens (re-elected).

Hunt-Rockwall-Rains County Society

November 12, 1940

(Reported by M. L. Wilbanks, Secretary)

Vulvovaginitis in Immature Females—J. G. Gathing, Houston.
The Negro Doctor in Surgery—J. M. Franklin, Prairie View.

Hunt-Rockwall-Rains Counties Medical Society met November 12, in Greenville, with twenty-seven members and visitors present. W. M. Dickens, vice-president, presided and the scientific program as given above was carried out.

Preston Hunt, President of the State Medical Association, was a guest and spoke briefly on public relations. He paid special tribute to the Woman's Auxiliary as an aid to the medical profession and pointed out the potentialities of that organization in public relations if properly directed. Dr. Hunt also stated that before the World War it was thought by many that a physician's education was not complete unless he had studied in Europe, but now it is generally recognized that the finest postgraduate facilities in the world are in the United States.

Vulvovaginitis in Immature Females (J. G. Gathing).—The disease has been known for centuries but there are different opinions in regard to its pathologic processes. The psychic impression of the disease upon children is profound in that it interferes with schooling, places them in a group aside from their playmates, and causes many to seek treatment either in gynecologic or venereal disease clinics with adults. Modes of infection, complications, prognosis, and therapy were discussed. Cultures are an aid in diagnosis.

The paper was discussed by C. T. Strickland, M. L. Wilbanks, Joe Becton, W. B. Reeves and W. C. Morrow.

The Negro Doctor in Surgery (J. M. Franklin).—Dr. Franklin first expressed his appreciation of the courtesies shown him and other negro physicians by the Hunt Rockwall-Rains Counties Medical Society. He then gave a brief historical sketch of the typical early negro physician and listed the schools for negro physicians in the United States. He pointed out that hospitals are essential for medical training and compared the hospital facilities available to negro physicians twenty-five years ago and now. As a result of increased hospital facilities the practice of surgery by negro physicians is constantly increasing. A tribute was paid by Dr. Franklin to white physicians in general and Southern doctors in particular.

The paper of Dr. Franklin was discussed by L. G. Pinkston, Dallas, C. T. Strickland, M. L. Wilbanks, Joe Becton, W. B. Reeves, and W. C. Morrow.

New Member.—Joe M. Allison, Emory, was elected to membership by transfer from Tarrant County Medical Society.

Resolutions.—Resolutions of condolence were adopted on the death of Dr. J. W. Benton, Dr. P. W. Pearson, and Dr. S. L. Wadley.

A committee composed of Joe Becton, M. L. Wilbanks, and E. T. Crim was appointed to confer with the Woman's Auxiliary with regard to arrangements for entertainment of the North Texas District Medical Society meeting in Greenville, December 4. A finance committee in connection with the entertainment was appointed, as follows: W. P. Philips, chairman, J. W. Ward, and H. W. Maier.

Jefferson County Society

November 11, 1940

(Reported by W. Price Killingsworth, Secretary)

Use of Analgesics in Obstetrics (lantern slides)—E. L. King, Professor of Obstetrics, Tulane University School of Medicine, New Orleans.
When Bobby Goes to School (motion picture)—Mead Johnson and Company.

Jefferson County Medical Society met November 11, 1940, at the Country Club, Beaumont, with 118 members, wives, and guests present. James W. Long, president, presided, and the scientific program as given above was carried out.

The paper of Dr. King was discussed by Frank B. Hart, John Smith, H. G. Bevil, A. R. Autrey and F. J. Beyt.

New Member.—W. A. Newton, Beaumont, was elected to membership on application.

President Long appointed the following committee to arrange for the December meeting at which time the Society's annual banquet will be held and officers for the new year will be elected. The meeting will be held at the Goodhue Hotel, Port Arthur.

Secretary Killingsworth read a report of the Selective Service activity as it concerns local physicians in regard to examining local draftees.

At the conclusion of the business meeting, dancing was enjoyed.

Kaufman County Society

December 3, 1940

(Reported by D. H. Hudgins, Secretary)

New Officers.—At a meeting of the Kaufman County Medical Society, December 3, in Terrell, the following officers were elected for the ensuing year: President, T. S. Howell, Terrell; vice-president, E. D. Lane, Terrell; secretary-treasurer, R. J. Rowe, Jr., Kaufman; new member board of censors, G. G. Shaw, Kaufman; delegate, D. H. Hudgins, Forney, and alternate delegate, William Thomas, Terrell.

Panola County Society

December 8, 1940

(Reported by Lynn C. Hooker, Secretary)

Panola County Medical Society met December 8, 1940, in the offices of W. G. Carnathan, Carthage, Texas. The following officers were elected for the ensuing year: President, C. F. Hull, Carthage; vice-president, W. G. Carnathan, Carthage; secretary-treasurer, Lynn C. Hooker, Carthage; members, board of censors, C. D. Baker and W. G. Carnathan of Carthage, and Z. L. Daniel of Gary; delegate, C. D. Baker, Carthage, and alternate delegate, S. L. Boren, Carthage.

Since the membership this year is limited to a small number the Society voted that the various committees would be composed of the entire membership of the Society.

Stephens-Shackelford-Throckmorton Counties Society

December 12, 1940

(Reported by D. J. R. Youngblood, Secretary)

Sulfanilamide, Sulfathiazole, Sulfapyridine—Baily R. Collin, Wichita Falls.
Modern Treatment of Pneumonia—DeWitt Neighbors, Fort Worth.
Surgery in Diabetes—J. A. Heymann, Wichita Falls.
Version in Extraction—A. B. Pumphrey, Fort Worth.

Stephens-Shackelford-Throckmorton Counties Medical Society met December 12, at the Burch Hotel, Breckenridge. The scientific program as given above was carried out.

The paper of DeWitt Neighbors was discussed by T. C. Terrell, Fort Worth; the paper of J. A. Heymann, by W. R. Snow, Abilene, and the paper of A. B. Pumphrey, by R. W. Varner, Abilene.

Tarrant County Society

November 19, 1940

(Reported by Craig Munter, Secretary)

Symposium on Cancer:
Etiology—W. P. Higgins, Fort Worth.
Chemistry—F. L. Snyder, Fort Worth.
Treatment (theoretical considerations)—Frank Schoonover, Fort Worth.

Tarrant County Medical Society met November 19, with forty-nine members and three visitors present. The scientific program as given above was carried out. The papers were discussed by May Owen, John J. Andujar, Eugene V. Powell, Jack Furman, Michael J. Pescor and S. J. Wilson.

New Member.—Robert P. McDonald was elected to membership on application.

Secretary Munter introduced and moved the adoption of a resolution requesting the State Medical Association, at the earliest possible moment, to enact necessary legislation to make continuous the membership of any member in good standing, without cost to him, who leaves his practice to become active in any branch of military service, and that such membership be continued until the member is discharged from the service. The resolution further provided that the Tarrant County Medical Society amend its by-laws to provide for omission of the county society part of the annual dues of such member. The motion to adopt the resolution was seconded by S. J. Wilson and carried.

President Godley announced the appointment to the board of censors of S. J. R. Murchison to fill the vacancy created by the absence of John J. O'Reilly, now on active duty in the military service of the United States.

The attendance prize, a floor lamp, was won by L. O. Godley.

Following adjournment a motion picture, "The Responsibility of the Physician in the Prevention, Diagnosis, and Treatment of Carcinoma," was shown through the courtesy of Dr. J. M. Martin, Dallas.

December 3, 1940

Tarrant County Medical Society met December 3, with eighty-seven members present.

New Member.—Wallace B. Smith was elected to membership on application.

Resolutions.—Resolutions of condolence were adopted on the death of Dr. I. A. Withers of Fort Worth.

Reports were received from the following officers: President L. O. Godley; Secretary Craig Munter; and committees: *program*, J. R. Cochran; *clinic*, Sim Hulsey; *Bulletin*, E. L. Howard; *legislative*, Valin R. Woodward; *membership*, R. L. Grogan; *publicity*, Craig Munter; *cancer education*, S. J. Wilson; *attendance*, E. E. Anthony; *sick and relief*, J. Haywood Davis; *entertainment*, Porter Brown; *public relations*, H. O. Deaton; *portrait and memorial*, E. D. Rogers; *medical economics*, B. C. Ball; *inter-society relations*, T. C. Terrell; *intern relationships*, John J. Andujar; *delegate to Northwest Texas District Society*, R. G. Baker; *military affairs*, Wilmer Allison.

Officers.—The following officers were elected to serve during the ensuing year: President-elect, R. J. White; vice-president, Bert C. Ball; secretary-treasurer, W. P. Higgins; delegate (place 1). L. O. Godley; alternate delegate (place 1), J. W. Tottenham, Jr.; board of censors, S. J. R. Murchison (for the unexpired term of John J. O'Reilly), and Mal Rumph.

C. O. Terrell and Harold Williams explained the plan of the State Board of Health to hold pediatric clinics for the examination of indigent, well babies.

L. H. Reeves moved that action on approval of such pediatric clinics be deferred at this time, which motion was seconded by J. B. Shannon and carried.

E. L. Howard moved that the Society endorse the contract entered into between the board of directors of the Society and the editor-manager of the *Bulletin of Tarrant County Medical Society*, which motion was seconded by T. C. Terrell and carried.

C. P. Schenck moved that all reports of officers and committee chairmen be received and filed, which motion was seconded by R. H. Needham and carried.

Resolutions.—J. H. McLean introduced resolutions, amended by R. G. Baker, providing that delegates from the Society to the State Medical Association be instructed to institute such measures at the next State Association meeting as would result in the repeal of the annual registration law taxing Texas physicians $2 annually. The resolutions as amended were adopted.

John M. Furman presented a birthday gift from the Society to the assistant secretary.

The attendance prize, a waffle iron, was won by John M. Furman.

Wichita County Society

December 10, 1940

(Reported by C. E. Mangum, Secretary)

The Neurological Consideration of Low Back Pain and Sciatica—Harry Wilkins, Oklahoma City.

Wichita County Medical Society met December 10, at the Wichita Club, Wichita Falls, with forty-three members present. The scientific program as given above was carried out.

New Officers.—The following officers were elected for the ensuing year: President, W. J. Masters; vice-president, F. R. Landon; secretary-treasurer, R. L. Nelson; and new member, board of censors, J. A. Little.

The society voted that the president appoint a nominating committee in November prior to the election of officers in December.

CHANGES OF ADDRESS

Dr. J. W. E. H. Beck, from DeKalb to Austin.

Dr. R. B. Burns, from Giddings to Midland.

Dr. John A. Crockett, from Harlingen to Austin.

Dr. B. H. Estess, from Austin to Jasper.

Dr. C. W. Evans, Jr., from Fastrill to El Paso.

Dr. Kenneth R. Flamm, from Amarillo to Camp Bowie, Brownwood.

Dr. H. J. Frachtman, from Houston to Fort Crockett, Galveston.

Dr. Hugh Fultz, from Premont to Falfurrias.

Dr. John C. Galbreath, from Alvin to Longleaf, Louisiana.

Dr. James F. Garmany, from Mineral Wells to Lubbock.

Dr. L. E. Gee, from Lone Oak to Avinger.

Dr. F. W. Halpin, from Fort Worth to Fort Crockett, Galveston.

Dr. A. A. Hellams, from Ferris to San Antonio.

Dr. T. R. Jones, from Beaumont to Houston.

Dr. Ernest C. Reed, from Legion to Whipple, Arizona.

Dr. Preston R. Sanders, from Big Spring to El Paso.

Dr. Van C. Tipton, from Austin to Macon, Georgia.

Dr. Everett P. Veatch, from Pasadena to Bolahum, Liberia, West Africa.

Dr. John H. Walker, from Montezuma, New Mexico to Fort Morgan, Colorado.

Dr. Harold A. Wood, from San Antonio to Austin.

Dr. R. B. Wolford, from Midland to Fort Worth.

Dr. J. Weldon Carter, from Palestine to Tyler.

Dr. D. B. Currie, from Kerens to Center.

Dr. D. W. Davis, from Sanatorium to George West.

Dr. Fred Harrell, from Olney to Marfa.

Dr. L. J. Hawker, from Fort Worth to San Antonio.

Dr. M. J. Kuykendall, from Wortham to Blooming Grove.

Dr. James R. Martin from Houston to Dallas.

Dr. Ross Owens, from Alexandria, Louisiana, to Dayton, Ohio.

Dr. Harold D. Parks, from Dallas to East St. Louis, Illinois.

Dr. H. Leslie Robinson, from Austin to San Antonio.

AUXILIARY NOTES

Officers of the Woman's Auxiliary to the State Medical Association of Texas; President, Mrs. William Hibbitts, Texarkana; honorary life president, Mrs. A. C. Scott, Sr., Temple; president-elect, Mrs. S. F. Harrington, Dallas; first vice-president, Mrs. H. Leslie Moore, Dallas; second vice-president, Mrs. A. E. Moon, Temple; third vice-president, Mrs. A. B. Pumphrey, Fort Worth; fourth vice-president, Mrs. Joe B. Foster, Houston; recording secretary, Mrs. Walter A. Minsch, Kerrville; publicity secretary, Mrs. W. F. Armstrong, Fort Worth; treasurer, Mrs. J. Frank Clark, Abilene; parliamentarian, Mrs. J. W. Tottenham, Brownwood; and corresponding secretary, Mrs. Ralph Cross, Texarkana.

Notice.—The subscription cost of the *Bulletin* of the Woman's Auxiliary to the American Medical Association, issued quarterly, is $1.00 annually. Every Auxiliary member should have it. It contains interesting, informative material about activities of the Woman's Auxiliary throughout the United States. Subscriptions may be sent to Mrs. H. E. Christenberry, Highland Drive, Knoxville, Tennessee, or to Mrs. F. F. Kirby, State Auxiliary Bulletin Chairman, 2801 Sanger Avenue, Waco, Texas. Subscribe now. The *Bulletin* would be an attractive New Year's gift for an Auxiliary friend.

AUXILIARY NEWS

Bexar County Auxiliary held its first meeting of the year October 11, in the Tapestry Room of the St. Anthony Hotel, San Antonio, with Mrs. Max Johnson, president, presiding.

Mrs. L. B. Jackson gave the invocation.

Mrs. William Hibbitts, Texarkana, president of the State Auxiliary, was an honor guest and spoke on the subject, "Curbing the Club Woman."

Dr. Herbert Hill, president of the Bexar County Medical Society, extended greetings from that organization.

Mrs. E. J. Arendt gave vocal solos, accompanied by Mrs. A. M. Fisher.

Mrs. Merton Minter, San Antonio, newly elected second vice-president and social chairman, and Mrs. Scott Applewhite, new auditor of the Bexar County Auxiliary were introduced.

Twenty new members of the Auxiliary were introduced by Mrs. T. E. Christian.

Mrs. Harry Leap, music chairman, and Mrs. Asa Beach, luncheon chairman, and their committees were complimented on their arrangements for the meeting.

Mrs W. S. Shepherd, *Hygeia* chairman, reported that the *Hygeia* committee had cleared the sum of $101 from an old fashioned dance sponsored during the summer. The money realized from this affair was used to pay for six months subscription to *Hygeia* for many charitable institutions and rural schools in the county.

Distinguished guests present were Mrs. Victor Keidel, Fredericksburg, president of the Kerr-Kendall-Gillespie-Bandera Counties Auxiliary, and Mrs. William L. Secor, Kerrville, council woman of the Fifth District of the State Auxiliary.

In October, the Auxiliary entertained members of the Bexar County Medical Society with a Hallowe'en party and dance in the new recreation room, appropriately called the "Pill Box."

The November meeting was an open meeting to the public, and the program was in charge of the public relations committee, of which Mrs. John B. Gleckler is chairman.

Mrs. E. W. Coyle, San Antonio captain of the Woman's Field Army for the Control of Cancer, introduced Mrs. A. A. Ross of Lockhart, who spoke on Cancer Control. Mrs. Ross' talk was illustrated by a motion picture film, "Choose to Live," belonging to the United States Public Health Service and made available for the program by Dr. Dudley Jackson of San Antonio.

After the meeting members and guests enjoyed a coffee hour arranged for by the hospitality committee of which Mrs. Charles Boehs is chairman.

Bexar County Auxiliary entertained with a tea at the Medical Library Building, December 6, honoring new members, the meeting being in charge of the membership and social committees, of which committees Mrs. T. E. Christian and Mrs. Merton Minter are chairmen.

Bexar County Auxiliary met December 13, at the Medical Library Building for its Christmas luncheon. Mrs. Asa Beach, luncheon chairman, was in charge of decorations. An entertaining Christmas program was presented by Mrs. W. L. Hart, chairman of the army members of the Auxiliary, and Mrs. Harry Leap, music chairman.

Bowie-Miller Counties Auxiliary held its November meeting at the home of Mrs Harry E. Murry,

Texarkana. Mrs. Joe E. Tyson, president, presided.

Mrs. A. A. Herold, Shreveport, Louisiana, health chairman for the Woman's Auxiliary to the American Medical Association, was guest speaker. Mrs. Herold was introduced by Mrs. William Hibbitts, Texarkana, president of the State Auxiliary. Mrs. Herold stressed the importance of health legislation, and the important part that the medical profession is taking in the National preparedness program.

At the conclusion of the program, members and guests were served refreshments with Mrs. Herold and Mrs. Tyson presiding.

Mrs. C. B. Erickson, president of the Shreveport Auxiliary and Mrs. Joe Herd, also of Shreveport, were welcomed as guests.

Hostesses with Mrs. Murry were Mesdames Charles Adna Smith, Jr., E. L. Beck and R. H. T. Mann.

Bowie-Miller Counties Auxiliary members honored their husbands with a Christmas banquet December 14, at the Hotel McCartney, Texarkana. Each physician was presented a boutonierre upon arrival.

Dr. Preston Hunt gave the invocation.

Dr. William Hibbitts was toastmaster.

Mrs. William Hibbitts, president of the State Auxiliary, and Dr. Preston Hunt, president of the State Medical Association, were presented, as were the charter members of the Bowie-Miller Counties Auxiliary, these being Mesdames S. A. Collom, E. M. Watts, Charles Adna Smith, Sr., L. H. Lanier, J. T. Robison, Harry E. Murry, William Hibbitts, T. F. Kittrell, L. J. Kosminsky and R. H. T. Mann.

Following the invocation, Mrs. Joe Tyson, president, gave a toast welcoming the physicians as guests.

Mrs. Ralph Cross announced that the Bowie-Miller Counties Auxiliary is leading all county units of the American Medical Auxiliary in obtaining subscriptions to *Hygeia*.

Mrs. Allen Collom, Jr. announced plans for presenting Dr. W. W. Bauer, Chicago, director of the Bureau of Health and Public Instruction of the American Medical Association, in January.

Mrs. Roy Baskett, entertainment chairman, was assisted by the following members of her committee, Mesdames Harry Murry, William Hibbitts, Ralph Cross, Perry Priest, Louis P. Good, and H. E. Longino.

Latane Temple, guest speaker, entertained members and guests with an original, humorous talk on "Medical Research."

A floor show was presented by young dancers under the direction of Pauline Harris Lowry with Mrs. Ralph Brody as accompanist. Edna Clee McGraw gave the opening song and dance and acted as announcer.

In the Christmas quiz program, prizes were awarded to Drs. N. B. Daniel, R. R. Kirkpatrick, Richter, C. H. Frank, Mr. and Mrs. Latane Temple, and Mary Maddox Collom.

Dr. L. J. Kosminsky led guests in group singing.

Several numbers were given by a quintet composed of Mesdames Roy Baskett, Allen Collom, Jr., William Hibbitts, L. J. Kosminsky and N. B. Daniel.

Hostesses for the meeting were Mesdames William Hibbitts, S. A. Collom, T. E. Fuller, C. W. Kelley, P. H. Phillips, and W. H. Daubs.

Dallas County Auxiliary held its December meeting at the Dallas Country Club.

The meeting was in the form of a wedding anniversary party and table decorations carried out both this theme and the holiday spirit. The award for the most attractive table decoration went to Mrs. J. Shirley Hodges and her committee.

After a luncheon a style show of wedding gowns of various periods was presented. A prize was awarded to the gown of the bride of 1885, the wedding dress of Mrs. Edward Hall, worn by Mrs. J. Gilmore Brau. Mrs. Hall is the mother of Mrs. Joe H. McCracken, a member of the Auxiliary.

Other wedding frocks modeled were that of a bride of 1901, the gown of Mrs. W. O. Stephenson, worn by her niece, Miss Elsie Marie Stark; the bride of 1915, the gown of Mrs. Julius McIver; the bride of 1918, the gown of Mrs. W. E. Haley; the bride of 1925, the gown of Mrs. Ben Buford, worn by Mrs. B. J. Berger; the bride of 1930, the gown of Mrs. Robert Barton; the bride of 1935, the gown of Mrs. Dennis O'Brien, and the bride of 1938, the gown of Mrs. A. B. Small. Mesdames Julius McIver and W. E. Haley modeled their own marriage frocks. The finale in the show was a model wedding presented by the bridal department of A. Harris and Company, Dallas.

Special mention was accorded the bride of 1885, Mrs. John Turner, and Mrs. Harry M. Spence, who was married in August, 1940.

The Choral Club of the Auxiliary, under the direction of Mrs. Joseph Wolf, furnished the musical accompaniment for the show and introduced each bride with songs popular in the year she was wed.

Mrs. Gordon B. McFarland was in charge of arrangements for the party.

The Choral Club of the Auxiliary held its annual Christmas party in the form of a tea at the home of Mrs. Homer Powell, Dallas, with Mrs. S. A. Allesandra and Mrs. J. A. Stephenson as co-hostesses. Mrs. Ramsay H. Moore, president of the Auxiliary, was a special guest.

Mrs. Joseph Wolf is director of the choral club, Mrs. Tom B. Sandefer, accompanist, and Mrs. E. V. Dickey, chairman.—Mrs. R. L. Moore.

Harris County Auxiliary met November 25, at the Junior League. After a business session, an entertainment program was carried out consisting of a drama "Beyond," presented by the dramatic art department of the Southern School of Fine Arts, under the direction of Betty Greene Little.

Hostesses for the day were Mrs. V. C. Baird, chairman; Mesdames J. Peyton Barnes, J. Reese Blundell, Frank Cone, P. R. Cruse, C. Gary Turner, Joe E. Daniel, S. D. David, Neal M. DeVore, J. Roy Theriot, and J. Stanley Oliver.

Harris County Auxiliary members honored their husbands with a Christmas party December 17, at the Junior League. Hostesses for the evening were Mrs. Everett Seale, social chairman, and Mrs. Thomas W. Burke, co-chairman; Mesdames C. C. Green, Robert A. Johnston, James Greenwood, Sr., J. Alston Clapp, Jr., C. M. Aves, Fred A. Bloom, Allen McMurrey, Thomas D. Cronin, Guy E. Knolle, Allan C. Sacco, A. T. Talley, Allan Collette, H. Caplovitz, Robert M. Purdie, Gibbs Milliken, A. A. Ledbetter, J. J. Truitt, Walter A. Coole, Cecil M. Crigler, Charles D. Reece, Frank J. Iiams, Denton Kerr, J. Herbert Page, Homer E. Prince, John T. Moore, Edward T. Smith, Byron P. York, and Henry R. Maresh. —Mrs. C. Alsworth Calhoun.

Jasper-Newton Counties Auxiliary members entertained members of the Jasper-Newton County Medical Society with a Christmas party and turkey dinner at the Swann Hotel, Jasper, December 13.

During a brief business session, Mrs. B. H. Estes was welcomed as a new member.

Entertainment included accordion selections by Miss Evon Wilson and a reading by Mrs. W. R. Worthy. Sixteen guests were present.

Jefferson County Auxiliary held its annual Christmas party December 4, at the Hotel Beaumont, with a large attendance of members and guests.

Mrs. J. D. Thompson, Port Arthur, president of the South Texas District Auxiliary, presided during the program and introduced the guest of honor, Mrs. William Hibbitts of Texarkana, president of the State Auxiliary. Mrs. Hibbitts gave an interesting and inspirational talk.

A chorus composed of wives and daughters of members of the Jefferson County Medical Society sang Christmas carols under the direction of Mrs. R. B. Leggett accompanied by Mrs. H. B. Williford. In addition to the choral numbers, dancers from the Sproule school presented numbers. The entertainment features of the program were arranged by Mrs. G. Haygood Hendry.

Gifts were exchanged. Hostesses for the day included Mesdames G. B. Stephenson, L. H. Ledbetter, H. D. Harlan, L. C. Powell, C. B. Shaddock, J. C. Crager, Seab Lewis, John Carter, L. C. Pecora, W. E. Tatum, and I. G. Wilson.—Mrs. M. E. Suehs, Jr.

Kerr-Kendall-Gillespie-Bandera Counties Auxiliary held its December luncheon meeting in the home of Mrs. C. L. McClellan, Kerrville, with twenty-one members and seven visitors present.

Mrs. W. L. Secor, Kerrville, presented an interesting public relations program.

Miss Ruth Gilliland, Kerr County public health nurse, gave a talk on her work in the county and stressed the value of health education for the laity.

Mrs. Bob Bennett, president of the Kerrville City Council of Parent Teachers Association, was introduced by Mrs. Jack Stevens, president of the Junior-Senior Parent Teachers Association, and spoke on the work being done for underprivileged children by the Council.

Mrs. J. H. Pennington, Legion, described the work being done for underweight children by the Forty and Eight Club of Legion, who are supplying these underprivileged children with calcium, cod liver oil and milk.

A business session was then conducted by the president.

The treasurer reported a balance of $72.35 in the treasury.

Mrs. J. C. Herrick of the membership committee reported three new members enrolled in the Auxiliary during the past month.

Mrs. E. C. Reed, representative from the Auxiliary to the Kerr County Welfare Council, urged that the Auxiliary clear all philanthropic work through the Council.

Mrs. H. H. Gallatin, of the courtesy committee, reported that a telegram of condolence was sent to Mrs. L. H. Webb on the occasion of Colonel Webb's death. Mrs. Gallatin moved that a donation of $5 be made to the State Auxiliary memorial fund in memory of the late Dr. Penson, father of Mrs. S. E. Thompson of Kerrville.

Mrs. J. D. Jackson reported for the child welfare committee on money spent for underprivileged children. On her suggestion, the Auxiliary voted to donate $7.50 per month to the Council for the remainder of the school year, with provision that extra funds be raised for the benefit of underprivileged children in Kerrville should the need arise. The Auxiliary further voted that a committee be appointed to investigate the needs in the other counties represented in the Auxiliary and report to the Auxiliary, and to make similar donations accordingly. The following committee was appointed: Mrs. C. C. Jones for Kendall County and Mrs. J. J. Hanus for Gillespie County.

On motion of Mrs. W. A. Minsch, the Auxiliary voted to offer a first prize of $3 and a second prize of $2 for the essay contest for high school students.

After considering a request for a donation by the Auxiliary to the Christmas Seal campaign, it was voted that members should buy seals individually.

Mrs. Victor Keidel gave a report of a Red Cross rally in Fredericksburg at which Gillespie County members of the Society served tea. She also reported assistance given to physicians in the National Defense program of the American Medical Association.

Eight members reported having read the JOURNAL.

After discussion, it was voted to discontinue sending Christmas Cheer baskets since other organizations distribute them, and that the funds previously used for this purpose be expended for other philanthropic needs.

A vote of appreciation was extended Mrs. E. C. Reed for her splendid work in the Auxiliary and for her friendship to each member. This was the last meeting Mrs. Reed would attend as a member, since she is moving to another location.

Liberty-Chambers Counties Auxiliary honored Mrs. William Hibbitts, Texarkana, president of the State Auxiliary, with a luncheon at the City Hall, Liberty, recently. Eleven members and two guests were present, including Mrs. Hibbitts and Mrs. P. R. Denman of Houston.—Mrs. A. L. Delaney.

Tarrant County Auxiliary held a coffee at the Womans Club, Fort Worth, December 13.

Rev. Sherwood S. Clayton discussed Christmas-keeping in various lands and carols were sung by Misses Priscilla Thomason, Patricia Riggins, and Betty Jean Sanders.

Mrs. L. P. Hightower, program chairman for the year, arranged the program.

The decorations carried out the Christmas theme.

After the program, Mrs. J. F. McVeigh, president, and Mrs. C. O. Terrell, president-elect, poured.—Mrs. A. D. Ladd.

Tom Green Eight County Auxiliary met December 2 in the home of Mrs. G. L. Lewis, San Angelo, with thirteen members and three guests present.

Mrs. B. T. Brown, vice-president, presided.

Mrs. W. M. Whitfield, a guest, described customs and beautiful scenes of Rio de Janeiro, Argentina, from where she had recently returned after a two and one-half years residence.

After the program a social hour was enjoyed with Mesdames R. L. Powers and R. B. Round as hostesses with Mrs. Lewis.

The hot lunch room in the Mexican school in the McGill district in San Angelo, sponsored by the Auxiliary, began operation December 10. This project will be continued until ~~January~~ June 1.—Mrs. Lewis K. Tester. *

Washington County Auxiliary honored Mrs. William Hibbitts, Texarkana, president of the State Auxiliary with a luncheon, October 28, at the Hotel St. Anthony, Brenham.

The invocation was given by Mrs. H. G. Simmons.

Mrs. N. D. Jarrell, program chairman, introduced Mrs. Hibbitts, who spoke on the subject, "The Art of Staying Organized," stressing the importance of a definite program of activity, and outlining the work of the State Auxiliary, such as the student loan funds, memorial funds, and other functions of the organization.

Hostesses for the luncheon were Mesdames N. D. Harrell, Somerville; Gus Heineke, Robert A. Hasskarl, Olga Knolle, W. F. Hasskarl, H. G. Simmons, and Roger Knolle, Brenham, and A. H. Sinclair, Burton.

Washington County Auxiliary met November 25, at the St. Anthony, Brenham.

Mrs. N. D. Jarrell read a paper on "New Problems Facing the Medical Profesion."

Mrs. Richard Spinn gave a summary of bills pending in Congress affecting the medical profession.—Mrs. A. C. Miller.

South Texas District Auxiliary held its annual meeting December 2 and 3, in Houston.

Mrs. William Hibbitts, Texarkana, president of the State Auxiliary, was the principal speaker.

Officers elected to serve the District Auxiliary for the ensuing year were: President-elect, Mrs. Marvin Duckwortth, Cuero; first vice-president, Mrs. S. J.

* June (Correction on p. 766).

Blasingame, Wharton; second vice-president, Mrs. W. D. Brown, Beaumont; third vice-president, Mrs. A. A. Ledbetter, Houston; recording secretary, Mrs. Jack Bartell, Conroe; corresponding secretary, Mrs. T. O. Woolley, Brenham; press secretary, Mrs. G. Waltron, Houston; treasurer, Mrs. C. E. Southern; and parliamentarian, Mrs. M. Jones, Hempstead.

Mrs. Robert A. Hasskarl, Brenham, president-elect for the past year, was installed as president for the new year.

The session of the Auxiliary was concluded with a luncheon. In addition to the luncheon there were several entertainment features for members of the District Auxiliary, including a style show.

Mrs. J. M. Martin of Dallas, a member of the Dallas County Auxiliary and wife of Dr. J. M. Martin, died November 17, 1940.

Mrs. Bernard H. Bloom of San Antonio, the wife of Dr. Bloom of that city, died September 5, 1940.

Carl Bosshardt, Jr., son of Dr. and Mrs. C. E. Bosshardt of San Antonio, died October 17, 1940.

BOOK NOTES

[1]**A Textbook of Pathology.** By W. G. MacCallum, M. D., Professor of Pathology and Bacteriology, The Johns Hopkins University, Baltimore. Seventh Edition, Thoroughly Revised. 1302 pages with 697 illustrations. Cloth, $10.00. W. B. Saunders Company, Philadelphia and London, 1940.

MacCallum leads the reader into deep channels of thought in his 1940 Textbook of Pathology. He delves into the realm of pathological changes, into known etiology and into the many theories of those mysteries of medicine still to be unraveled. He makes one realize the new significance of old truths as he relates them.

His survey of the field of experimental medicine is intriguing. Robison's phosphatase theory of calcium and phosphorus metabolism, Goldblatt's theory of renal ischaemia and hypertension, the Herxheimer reaction in syphilis, Von Gierke's disease with its endocrine possibilities are each given special attention.

Four chapters are devoted to minute discussion of virus diseases, poliomyelitis, the common cold, rheumatism, influenza, yellow fever, dengue, rabies, measles, smallpox, scarlet fever possibly, lymphopathia venereum, etc.

Arteriolitis and periarteriolitis especially affecting arterioles of skin, muscles, kidneys, brain are described in detail as the main pathological processes in the various rickettsia diseases, typhus, Rocky Mountain fever, etc.

How tuberculosis is acquired receives considerable attention. The permeability of the intestinal tract of children to the tubercle bacilli is mentioned as the cause of glandular tuberculosis in children rather than the ordinary ulcerative intestinal type.

The mechanics of the circulation and of hypertension and hypotension and their results, the real cause of death in cardiac disease, the real cause of death in fulminating bacterial infections, the difference between hemorrhages into pulmonary tissue and pulmonary infarcts, the physics of bronchiectasis, emphysema and atelectasis, the acute splenic tumor of infections are mentioned as a few of the interesting subjects treated.

Endocrine disorders receive a generous amount of attention from the author.

Of the different systems, diseases of the kidneys come in for a special review of classifications with reasons for his method of classification and numerous micro- and gross photographs as illustrations to support his views.

[1]Reviewed by Martha A. Wood, M. D., Houston, Texas.

Hodgkin's disease is dealt with in a chapter apart from the leukemias since he states that it stands apart as probably of infectious origin.

Experimental medicine's search for the causes of new growth, with especial mention of chemical possibilities and hormone influences is described in detail.

The illustrations of the book are numerous and excellent, especially the microphotographs. References to the literature are abundant.

The work is so all-inclusive in its scope that scant justice can be done it in a brief review.

[2]**Clinical Practice in Infectious Diseases.** By E. H. R. Harries, M. D., Lond., Medical Superintendent, North-Eastern Hospital (London County Council) and M. Mitman, M. D., Lond., Medical Superintendent, Rivers Hospital. With a foreword by W. Allen Daley, M. D., Lond., F. R. C. P., D. P. H. Cloth, 468 pages, illustrated. Price, $6.00. A William Wood Book, The Williams and Wilkins Company, Baltimore, 1940.

Out of war-time England comes this splendid text on infectious diseases. In deference to the war "certain diseases likely to assume increased importance under war conditions have been included, *e. g.*, Weil's disease, the louse-borne infections, epidemic influenza, and tetanus."

The text comprises thirty-seven chapters, the first eleven of which deal generally with the common factors of infectious diseases such as immunity, serum reactions, types of rashes, epidemiology and controls. The succeeding twenty-five chapters take up specifically individual infectious diseases and deal with them in a very practical and thoroughgoing manner. The final chapter is one on the control of infectious diseases in the hospital.

As a text for students, as a ready reference for practitioners, as a supplement to textbooks of medicine, the volume is well worth while; as good reading for any one interested in infectious diseases it is delightful.

[3]**Cancer in Childhood.** Edited by Harold W. Dargeon, M. D., F. A. C. P. Attending Pediatrician, Memorial Hospital for Cancer and Allied Diseases, New York; Associate Pediatrician, St. Luke's Hospital, New York; Instructor in Pediatrics, College of Physicians and Surgeons, Columbia University. Cloth, 111 pages, illustrated. Price, $3.00. The C. V. Mosby Company, St. Louis, 1940.

This book consists of a symposium on malignant tumors which occur in childhood. The papers, with the exception of one, and a critical review by Dr. James Ewing, appeared in various issues of the *Journal of Pediatrics*. They are written by members of the staff of the Memorial Hospital for Cancer and Allied Diseases in New York, and the material comes largely from children admitted to this hospital during the last fifteen or twenty years.

Malignancies in childhood, as compared to those in adult life, are relatively infrequent. It is this infrequency that causes the average physician dealing with children to fail to consider the possibility of malignancy in many conditions in which there is a tumor mass. All too frequently the realization that the trouble is due to malignant neoplasm dawns so late that what chance there was for effective treatment is gone because too great extension, both direct and metastatically, has occurred. Relatively much more rapid growth and much earlier metastases occur in cancer in children than in similar types in adults, and, consequently, earlier recognition is even more important.

[2]Reviewed by John K. Glen, M. D., Houston, Texas.
[3]Reviewed by Robert L. Moore, M. D., Dallas, Texas.

Such a book as this serves an admirable purpose and is well worth the time of any pediatrician, as well as of many surgeons. The papers are, as a whole, well written. The material is as great as could be obtained anywhere and the source of the material is evidence enough that it has been carefully and completely studied. Dr. Dargeon should be thanked for gathering together these papers in book form, and making a neglected subject easily available to those interested in diseases of children.

[4]**A Textbook of Medicine.** Edited by Russell L. Cecil, A. B., M. D., Sc. D. Professor of Clinical Medicine, Cornell University Medical College: Associate Attending Physician, New York and Bellevue Hospitals, New York City. Associate Editor for Diseases of the Nervous System: Foster Kennedy, M. D., F. R. S. E. Professor of Clinical Neurology, Cornell University Medical College. Cloth, 1744 pages with 173 illustrations. Fifth Edition, Revised and Entirely Reset. Price, $9.50. W. B. Saunders Company, Philadelphia and London, 1940.

The fifth edition of Cecil's Textbook of Medicine, by American Authors, makes its appearance with numerous changes. One hundred and forty-four contributors—twenty more than in the fourth edition—have collaborated to produce an authoritative treatise on internal medicine which is as up-to-date as crystalline insulin, sulfathiazole, and desoxycorticosterone. The list of contributors is made up of distinguished physicians and medical scientists of the staffs of great universities, hospitals, and medical institutions—physicians who are also teachers. So rapidly have changes occurred that ten new topics not covered in the fourth edition have been added and thirty new treatises on subjects previously covered.

The general plan of the textbook is to discuss by etiology where such is known and by systems or organs when the etiology is not specific. Those diseases of great and general clinical importance receive adequate treatment; the rare or relatively unimportant receive considerably less. In a majority of instances there is a brief historical note concerning each disease as well as a reference list for supplementary reading.

To cover the entire subject of internal medicine in 1,682 pages of text and sixty-two pages of index indicates clearly that nothing superfluous is present in this one volume; it is concise, succinct, but withal complete, adequate, and authoritative. In the opinion of this reviewer, this textbook is the outstanding single volume on internal medicine.

DEATHS

Dr. **William Leonard Simmons** of Eastland, Texas, died November 2, 1940, at his home, of cerebral hemorrhage.

Dr. Simmons was born November 17, 1869, in Pike County, Alabama, the son of Dr. W. L. and Mollie (Kerbie) Simmons. He came to Weatherford, Texas, when a child, his father being a pioneer physician of Parker County. His preliminary education was received in the schools about him. His medical education was obtained in Tulane University, New Orleans, Louisiana, and the Baltimore Medical College, Baltimore, Maryland, from which latter institution he was graduated in 1893. He had lived and practiced twelve years at Brazos, nine years at San Angelo, nine years at Coleman, twelve years at Big Spring, and for the past two years at Eastland, Texas, until his death.

Dr. Simmons was for many years a member of the State Medical Association and American Medical Association through the county medical societies of his various places of residence. He specialized in the treatment of eye, ear, nose and throat disease. Charitably inclined he had rendered much service to the poor without thought of compensation. Dr. Simmons was a member of the Methodist Church and the Woodmen of the World fraternal organization.

Dr. Simmons was married twice. His first wife died October 12, 1935. His second marriage was to Mrs. Mamie Bradford of Santo, December 6, 1936, who survives him. He is also survived by a son, W. L. Simmons, Jr., Midland, and a stepson, Engle Bradford, Santo.

Dr. **Henry A. Lile**, of Harlingen, Texas, died October 21, 1940, in a hospital at Cherokee, Oklahoma, of mesenteric thrombosis.

Dr. Lile was born May 6, 1874, in Barton, Kansas, the son of George and Mary Jane (Ferryman) Lile. His academic education was received in the Great Bend Normal College, Great Bend, Kansas. His medical education was obtained in the Barnes Medical College, St. Louis, Missouri, from which institution he was graduated in 1899. He had taken postgraduate work during his professional career at Tulane University, New Orleans, Louisiana; the University of Texas School of Medicine, Galveston; Northwestern University, Evanston, Illinois; Cook County Hospital, Chicago, and Rochester, Minnesota. He lived and practiced at Carwile, Oklahoma, from 1901 to 1905; at Aline, Oklahoma, from 1905 to 1915; at Cherokee, Oklahoma, from 1915 to 1928, and at Harlingen, Texas, from 1928 until his death.

DR. H. A. LILE

Dr. Lile after his location in Texas had been a member continuously in good standing of the Cameron-Willacy Counties Medical Society, the State Medical Association and the American Medical Association from 1934 until his death. While practicing in Oklahoma he had been a member of the American Medical Association through county medical societies in that state. He was a former vice-president of the Oklahoma State Medical Association. During his residency at Aline, Oklahoma, he was chief surgeon of the Aline Hospital, and while living at Cherokee, Oklahoma, he was chief surgeon of the Alfalfa County Hospital and the Masonic Hospital in that city. During the World War he served as a Captain in the medical Corps of the U. S. Army, being stationed at Camp McArthur, Texas.

He had an established reputation as a surgeon. He was the originator of a certain type of surgical stitch, which is known as the "Lile" stitch, and is used abroad as well as in this country.

Dr. Lile was a member of the Christian Church, and a thirty-second degree Mason. He was a charter

[4]Reviewed by W. G. Reddick, M. D., Dallas, Texas.

member of the Cherokee, Oklahoma, Rotary Club and a member of the Fish and Game Commission of the Lower Rio Grande Valley in Texas.

Dr. Lile was married June 6, 1926, to Miss Ella Nora Miller of Helena, Oklahoma. He is survived by his wife; a sister, Mrs. Lena Steele, Spearville, Kansas; and four half brothers, Garfield and Blaine Smith, Pawnee Rock, Kansas; Ed Smith, Cherokee, Oklahoma, and Earl Smith, Great Bend, Kansas.

Dr. William E. Menefee of Cleburne, Texas, died November 13, 1940, at his home in that city, of diabetes, following an extended illness.

Dr. Menefee was born April 30, in Johnson County in the community now known as old Grange Hall.

DR. W. E. MENEFEE

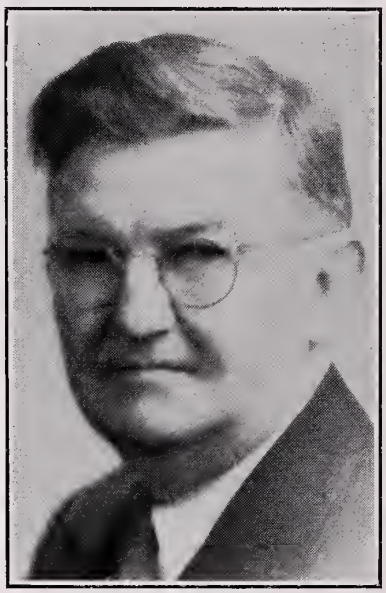
He was the son of a pioneer Texan, a Methodist minister and farmer, W. O. Menefee, and Mary Armstrong Menefee. His academic education was received in the traditional log school house of that day and completed in the Mansfield College and old Add Ran College at Thorp Spring, the latter the forerunner of Texas Christian University at Fort Worth. His medical education was received in the Tulane University School of Medicine, New Orleans, from which he was graduated in 1888. He began the practice of medicine at West, Texas, where he remained four years. He then lived and practiced at Geneva, Texas, four years, following which he removed to Cleburne, where he had lived continuously until his death with the exception of the period from 1918 to 1924, during which time he served as an assistant physician at the State Hospital for Mental Diseases at Terrell, Texas. In 1924, he was compelled to relinquish this position on account of his health and return to Cleburne, where he lived until his death.

Dr. Menefee was for many years a member of the State Medical Association and American Medical Association, first through the McLennan County Medical Society, while residing in that county and through the Johnson County Medical Society after his removal to Cleburne. He had served McLennan County Medical Society as both president and secretary, holding the latter office for a number of years. He was a member, also, of the Hill and McLennan County Line Society during the existence of that organization. He was a past president of the Johnson County Medical Society, which organization he had served in nearly every official capacity. He was elected an honorary member of the Johnson County Medical Society in 1933 and of the State Medical Association in 1934, this membership status being continued from that time until his death. During his active years of practice he took a full part in the civic life of his community and held membership in various fraternal and other organizations such as the Odd Fellows and Masonic order. He was widely known and beloved by the community he had served well during the years of his active practice, and later as an interesting, cultured, educated doctor of medicine.

Dr. Menefee was married December 31, 1885, to Miss Mattie Rice Gee at Joshua, Texas, who survives him. To this union were born six children, all of whom preceded Dr. Menefee in death. He is also survived by two brothers, Edgar Menefee, Valley View, Texas, and C. J. Menefee, Phoenix, Arizona; and three sisters, Mrs. Emma Jones, Memphis, Tennessee; Mrs. Mittie Whitney, Dallas, and Mrs. Bettie Bell, Greenwood, Arkansas.

Dr. Samuel Lynn Wadley, of Royse City, Texas, died November 2, 1940, at his home, of cerebral hypertensive heart disease.

Dr. Wadley was born May 4, 1881, in Palmer, Ellis County, Texas. His academic education was received in the schools of his community and the Grayson College at Whitewright, Texas. His medical education was obtained in the University of Tennessee College of Medicine, from which he was graduated in 1905. He had taken postgraduate work at the old Fort Worth Medical College and the Tulane University School of Medicine, New Orleans. Dr. Wadley had practiced medicine in Ellis County for thirty-five years, residing the greater part of that time at Palmer. Two months before his death he moved to Royse City where he had since lived and practiced. Dr. Wadley had been for many years a member of the Ellis County Medical Society, State Medical Association and American Medical Association. He was a past president of the Ellis County Medical Society. He served the city of Palmer as health officer for many years. He was greatly beloved as a capable physician in the communities in which he had lived and practiced. He was a member of the Baptist Church, which institution he had served as a deacon for many years. He was a Mason and a member of the Woodmen of the World. In addition to his practice, he took an active part in the civic life of his community, which he had served as a school trustee.



DR. S. L. WADLEY

Dr. Wadley was married in 1904 to Miss Annie Brown of Palmer. To this union were born one son, Chester Wadley of Palmer, and a daughter, Mrs. Clemont Lanier of Ennis, who survive him. His first wife died October 11, 1934. On February 21, 1937, he was married to Mrs. Kate Linn of Forney, who survives him. He is also survived by two brothers, George Wadley, Palmer, and John Wadley, McAlister, Oklahoma, and two sisters, Mrs. J. M. Jenkins, Allen, Oklahoma; Mrs. Ruby Kincaid, Abilene, Texas, and two step-daughters, Mrs. Blocker Martin, Palmer, and Mrs. T. A. Morgan, Houston.

Texas State Journal of Medicine

EDITORIAL OFFICES: 1404 W. El Paso Street, Fort Worth, Texas
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Vol. XXXVI **February, 1941** **No. 10**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

The Dallas Southern Clinical Society will sponsor its thirteenth annual Clinical Conference, March 17, 18, 19 and 20. All activities will take place at the Hotel Adolphus. This conference is, as our readers are well aware, organized and presented for the single purpose of improving the medical knowledge and professional standing of reputable members of the medical profession. While the conference is directed by a limited number of Dallas physicians, it is conducted under the general patronage of the Dallas County Medical Society and the State Medical Association of Texas. In short, and while we are sure we need not make the assertion, it is strictly an ethical and orthodox affair. All physicians of good professional standing are invited to attend. The registration fee of $10.00 covers all features of the meeting, including luncheons and evening functions.

The four days of the meeting are filled to repletion with postgraduate opportunities, such as may be taken advantage of under the circumstances. There will be plenty of opportunity for recess, relaxation and fun. There will be a smoker Monday night of the meeting and a banquet Thursday night. What happens in between times is wholly the affair of those who cause them to happen, or give them the opportunity of happening.

The guest speakers for the conference are all of national importance in their respective fields. They have been selected for their ability to put over their messages and to reduce them to practicability from the angle of the physician at the bedside. The list follows:

Dr. C. J. Barborka, Chicago (Medicine).
Dr. W. Edward Chamberlain, Philadelphia (Radiology).
Dr. Harry Goldblatt, Cleveland (Pathology).
Dr. Leland S. McKittrick, Boston (Surgery).
Dr. Norman F. Miller, Ann Arbor (Obstetrics and Gynecology).
Dr. John J. Morton, Rochester, New York (Surgery).
Dr. Henry G. Poncher, Chicago (Pediatrics).
Dr. James C. Sargent, Milwaukee (Urology).
Dr. Marion B. Sulzberger, New York City (Dermatology).
Dr. Derrick Vail, Cincinnati (Ophthalmology).
Dr. Soma Weiss, Boston (Medicine).
Dr. Fletcher D. Woodward, Charlottesville, Virginia (Otolaryngology).

It is hardly any longer necessary to plead with our readers for their attendance on the several clinical conferences now for several years being so successfully held in Texas, not to mention the annual sessions of the State Medical Association. Texas doctors, and, indeed, the doctors of the several surrounding states, are keenly alive to the advantages of such opportunities. The attendance on our clinics, and those held in neighboring states, is ample support for this statement. We urge a continuation of the habit of our doctors of taking advantage of all such opportunities. Perhaps it is proof of the value of the proceedings of these clinical conferences that the State Medical Association has adopted many of them, revamping the proceedings of its annual sessions very extensively in order to do so. In short, we are strongly of the opinion that if the medical profession of our section of the country will make it a point to attend the State Medical Association annual sessions, and as many of these clinical conferences as possible, our people will be the

better served for it, and the profession itself will profit materially and professionally.

Having pioneered this field in our section of the country, the Dallas Southern Clinical Society feels a responsibility in the matter. In order to make full use of the time available for postgraduate work, there are general assemblies, round table luncheons, afternoon lectures, and evening meetings. A special effort is made to meet the requirements of the family physician, although ample scientific and professional pabulum is present for the specialist. We are sure the conference will enjoy the splendid attendance its teaching opportunities merit.

Chiropractic Legislation Under Way.—The anticipated measure providing for the legalization of chiropractic, has been introduced in the House of Representatives. It is known as H. B. No. 189. It was introduced by Representative Walter A. Ferguson of Overton, with the following co-signers: Representatives Clinton Kersey, Bridgeport; N. O. Burnaman, Newton; W. B. Hargis, Hemphill; Robert Avant, Harleton; J. B. Sallas, Crockett; Rushing Manning, Center; Joe Skiles, Denton; J. H. Martin, Wichita Falls; Dan Dove, Groesbeck; W. H. Rampy, Winters; R. C. Clay Parker, Graham; J. A. Benton, Wylie, and Jewell Helpinstill, Nacogdoches.

The bill was referred to the Committee on State Affairs. The personnel of this committee is as follows: Representatives Augustine Celaya, Chairman, Brownsville; Obel L. McAlister, Vice-Chairman, Fort Worth; Bruce Allen, Waxahachie; W. J. Bailey, Winnsboro; D. A. Blankenship, Dallas; Lester Boone, Fort Worth; Sherwood Brown, Jr., Galveston; Leonard Carlton, Commerce; Mrs. Neveille Colson, Navasota; Pat Dwyer, San Antonio; R. A. Fuchs, Brenham; Warren Henderson, Marlin; Joe C. Humphrey, Abilene; A. H. King, Throckmorton; B. J. Leyendecker, Laredo; Houston McMurry, Henrietta; Gene McNamara, Waco; Choice Moore, Bonham; M. F. Smith, Pleasanton; F. B. Voight, New Braunfels, and J. E. Winfree, Houston.

A hearing on the measure will be held soon, just how soon is not known. The Legislative Committee of the State Medical Association will oppose the measure at the hearing, and thereafter if the bill survives committee action.

It is hardly worth while to discuss this bill in these columns. It is about the usual thing. The first result of passage of the bill as is, would be to license a large number of practitioners of that cult without due determination of their qualifications even for the practice of this bizarre method of treating sick and injured people. That would in itself be a serious calamity. The next serious result would be the provision by law that a foolish idea and aborted scientific standard would be set up for the practice of medicine, which the practice of chiropractic undoubtedly and demonstrably is. As a corollary, there would follow similar provisions for an indeterminate and all too large number of such groups. The result would be chaos and confusion worse confounded in the healing art. It has proven so wherever multiple boards have been allowed to exist. The only silver lining we can anticipate in this woeful cloud is the probability that the group which gets in control when the law is set up will decide that for its own protection the entrance of too many similar practitioners should be inhibited. At least, that has happened in other states where such aberrant laws have been enacted.

The present Medical Practice Act is amply broad in its provisions to accommodate the practitioners of any school of medicine. The only requirement is that they shall be graduates of reputable and competent teaching institutions in the field of the practice of medicine. It must be admitted that such a provision is rather drastic when applied to such systems of practice as chiropratic, but it is a provision protective of the public health and must stand. The Legislature cannot afford to let down the bars in this respect. It is wrong to assume that the public will not patronize practitioners of such a bizarre system of practice. It must be remembered that the public is not always in a position to know who is qualified to treat the sick.

While it is true that the Legislature is not in a position to determine the truth or falsity of any theory of practice in medicine, and therefore might feel that it should allow the public to do its own choosing, it is at the same time true that medicine is only a part of the whole field of science, and one of many vocations with which the public is familiar. For that reason, legislators should have no difficulty in properly appraising our present Medical Practice Act. A legislator can at once see that this law provides for examinations in subjects useful and necessary to the practice of medicine about which educated men do not differ. It would seem sensible to require of a candidate for the privilege (not the right) of practicing medicine, that he be thoroughly informed on such subjects. It is not difficult to appreciate the advisability of not requiring examinations in therapeutics or the practice of medicine. It is there, and there only, that there may be legitimate dif-

ferences of opinion among educated people, and while we very definitely feel that our idea that there should be no limitation in theory of practice, and that all practice should be based upon demonstrable science and controlled experience and research, and that there should be no such thing as "schools" of medicine, we are prepared to agree, and do agree, that the legislator might with reason avoid decision in such matters. The legislator cannot, however, in our estimation, avoid decision as to whether or not practitioners of medicine, no matter what they call themselves, or what means they use and procedures they follow in their practice, shall be required to prove a mastery of the accepted branches of science which should, and must, form the basis for the art of the practice of medicine. The decision should be that such should be done, and that the present Medical Practice Act should be relied upon, and may be relied upon if properly enforced, to provide competent practitioners of medicine, and therefore protection for the public health and welfare.

It is hoped that our readers will remember that our legislators may or may not understand these things, for which reason it is their opportunity, if not their actual obligation, to see that they are informed. For the most part they want to serve the best interests of the public in health matters. Too frequently advocates of peculiar and specious systems of the healing art get to them first, and in such a way that they are excusably prejudiced, which state of mind, added to the almost universal feeling that the underdog should be helped, creates a very dangerous situation. Our obligations as physicians are not discharged until we do something about it.

Local Committees Fort Worth Annual Session are published here for the benefit of any of our readers who may have business connections with any of the activities involved. This is the group which bears the brunt of the preparation for the entertainment of our members, socially or scientifically. While it is true that the State Medical Association, through its central office, exercises control in both preparation and execution, the General Arrangements Committee and the several committees are depended upon for advice precedent to decision in any matters, and execution in many of them. We have an idea that it would surprise many of our members to know how much dependence is placed upon these groups by the central office of the Association. The members of the groups themselves hardly realize that. It is the way of democracy.

The list of local committees follows:

LOCAL COMMITTEES

General Arrangements.—C. O. Terrell, Chairman; R. G. Baker, Will S. Horn, T. H. Thomason, and R. L. Grogan.

Reception.—Shelton Barcus, Chairman; K. H. Beall, J. Haywood Davis, L. O. Godley, and Frank S. Schoonover.

Clinical Luncheons.—Will S. Horn, Chairman; Jerrell Bennett, J. Franklin Campbell, A. Keller Doss, George R. Enloe, C. C. Garrett, Morton Goldberg, R. L. Grogan, Rex Howard, William L. Howell, Sim Hulsey, Hub E. Isaacks, Frank McKee, J. F. McVeigh, W. O. Ott, J. L. Spivey, T. H. Thomason, R. J. White, and E. M. Wier.

Transportation.—Mal Rumph, Chairman; J. A. Hallmark, J. Mack Lawson, W. G. Phillips, and J. W. Tottenham.

Golf.—DeWitt Neighbors, Chairman; Abe Antweil, E. H. Bursey, Giles W. Day, and R. S. Mallard.

Finance.—Craig Munter, Chairman; R. G. Baker, J. R. Cochran, Nelson L. Dunn, and Carey Hiett.

Memorial.—Samuel Jagoda, Chairman; Edwin Davis, W. S. Lorimer, J. Robert Rinker, and Mal Rumph.

Information.—W. P. Higgins, Chairman; Zack Bobo, Jr., Earl Harris, E. L. Howard, and H. T. Jackson.

Scientific Exhibits.—B. C. Ball, Chairman; C. P. Hawkins, May Owen, Frank G. Sanders, and Sidney J. Wilson.

Technical Exhibits.—Charles H. McCollum, Jr., Chairman; L. D. Borough, Jack Furman, P. M. Nesbit, and Van D. Rathgeber.

Public Addresses.—John J. Andujar, Chairman; Wilmer Allison, I. P. Barrett, W. F. Ossenfort, and Sidney E. Stout.

Publicity.—H. O. Deaton, Chairman; Tom B. Bond, W. M. Crawford, Harold M. Williams, and J. R. Wise.

Halls and Lanterns.—E. E. Anthony, Chairman; Ted Lace, Eugene V. Powell, R. P. O'Bannon, and A. D. Roberts.

Hotels.—Sidney A. Price, Chairman; W. F. Armstrong, George W. Lacy, W. F. Parsons, and W. C. Tatum.

Alumni Banquets.—W. C. Foster, Chairman; M. H. Crabb, J. H. Grammer, H. C. Thomas, and Valin R. Woodward.

Entertainment.—L. H. Reeves, Chairman; Porter Brown, Horace K. Kibbie, S. J. R. Murchison, and T. C. Terrell.

SECTION SPONSORS

Medicine.—J. Morris Horn and A. L. Roberts.

Surgery.—Jack Daly and Harold J. Shelley.

Obstetrics and Gynecology.—Theron H. Funk and A. B. Pumphrey.

Eye, Ear, Nose and Throat.—J. Eschenbrenner and Gatlin Mitchell.

Radiology and Physiotherapy.—R. P. O'Bannon and Eugene V. Powell.

Public Health.—W. B. Nies and Harold M. Williams.

Pathology.—Robert J. Jernstad and May Owen.

Pediatrics.—C. O. Terrell, Jr., and C. S. E. Touzel.

GUEST SPONSORS

For Dr. Lawrence S. Fallis.—Jack Daly.
For Dr. Roscoe R. Graham—R. J. White.
For Dr. George W. Holmes—Eugene V. Powell.
For Dr. William J. Kerr—J. F. McVeigh.
For Dr. W. S. Leathers—Harold M. Williams.
For Dr. Ralph H. Major—William L. Howell.
For Dr. James B. McNaught—T. C. Terrell.
For Dr. E. D. Plass—Carey Hiett.
For Dr. Algernon B. Reese—Gatlin Mitchell.
For Dr. Frederic W. Schlutz—L. O. Godley.

Hotel Rates Next Annual Session are published herewith, with the suggestion that those of our readers who expect to attend the annual session will make arrangements now, in accordance with their needs and desires. Chances are that there will be ample hotel accommodations in Fort Worth at the time of our annual session, but there will not be the opportunity later on to pick and choose that exists now. Inevitably there are disappointments in this connection in store for latecomers, although we do not recall any meeting at which hotel accommodations of some sort could not be had at the time.

It will be entirely proper to address the Hotel of choice or the Chairman of the Hotels Committee, Dr. Sidney A. Price, 919 W. T. Waggoner Building, Fort Worth. Hotel headquarters will be the Texas. Hotel headquarters for the Woman's Auxiliary will be the Blackstone. There are only two blocks intervening. Practically all of the activities of the annual session will be held at the Texas.

Perhaps it will be of interest to interpose here the observation that arrangements for the annual session have been practically completed, and those in charge are very enthusiastic about it. Particularly will the scientific program be interesting and of importance. There will be further preliminary notice of the meeting published in the March number of the JOURNAL, and the program will be published, in full, in the April number, as per custom.

The list of hotels, tourist courts and rates for the variety of accommodations which they offer follows:

HOTEL RATES

Texas.—Single rooms, $2.00 to $5.00; double rooms, $3.00 to $5.00; twin beds, $4.00 to $7.00; three persons in a room, $4.50 and up; parlor suites, $10.50 and up; air conditioned single rooms, $3.00 to $5.00; air conditioned double rooms, $4.00 to $7.00.

Blackstone.—Single rooms, $2.50, $3.00, $3.50, $4.00, $5.00; double rooms, $4.00, $4.50, $5.00, $6.00; twin beds, $5.00, $6.00, $7.00; suites, $10.00 and up.

Westbrook.—Single rooms without bath, $1.50; double rooms without bath, $2.50; single rooms with bath, $2.00, $2.50, $3.00; double rooms with bath, $3.00, $3.50, $4.00; twin bedroom with bath, $3.50, $4.00, $5.00; two room suites (bedroom, living room and bath), $8.00.

Worth.—Single rooms, $2.00; double rooms, $3.00; twin beds, $4.00; air conditioned single rooms, $3.00; air conditioned double rooms, $4.00; with twin beds, $4.50.

Milner.—Single rooms, $1.00 and $1.50; double rooms, $1.50 and $2.00; with twin beds, $2.50.

Mayo Courts.—Double rooms, $2.00; cottages, single and double rooms, $2.50 and $3.00; two rooms with three double beds, $6.00; double rooms and kitchen, $2.50 and $3.00. Complete hotel service.

El Patio Lodge.—Rooms, single or double, $2.00; with twin beds, $2.50 to $3.50; suites, four to six persons, $4.00 and $4.50. Complete hotel service. Private dining room; meals served in room if desired.

The Scientific Exhibits for the Next Annual Session are now being listed. Space will shortly be assigned exhibitors. This statement is by way of a warning that the space in question is limited. Those who are in a position to present scientific exhibits at the Fort Worth meeting, should communicate with the Chairman of the Committee, Dr. X. R. Hyde, at the office of the State Medical Association, 1404 W El Paso, Fort Worth, without delay, or communicate in some way with other members of the committee, some of whom may be more immediately available than others. Drs. Charles Phillips, Scott & White Clinic, Temple; John L. Goforth, Box 1074, Dallas; John M. Moore, Medical Arts Building, San Antonio, and W. W. Coulter, 1215 Walker Avenue, Houston, are the other members of the committee.

The scientific program for the annual session has been compiled. A most excellent idea in connection with any meeting of a medical nature is to present exhibits supplementary to the scientific program proper. This policy has long been followed by the American Medical Association, and the annual meetings of that organization are so featured at the present time. Numerous volunteer papers for our scientific sections have had to be rejected because they were offered too late. We hope that all available scientific exhibits will be offered right away, in order that the space set aside for the purpose may be utilized to the best advantage of all concerned.

Last Call Medical Preparedness Questionnaire.—The military emergency confronting us has assumed such proportions that the American Medical Association Committee on Medical Preparedness must close the books on its questionnaire right away. Therefore, our Committee on Military Affairs has furnished each county medical society with a list of the physicians within its juristiction, whether or not members, who have not turned in their questionnaire and who should do so, at least so far as the records can indicate. County society secretaries and chairmen of county society military affairs committees, have been asked to see to it that each of these is contacted, furnished with an additional questionnaire, and importuned to lose no time in accomplishing the same. That would seem to be about all that we can do about it.

While it is appreciated that many of the physicians listed as licensed to practice medicine in Texas are not, in fact, eligible, for one reason or another, for military or any other governmental service, the fact remains that our percentage of accomplishments of these questionnaire is relatively small. On February first, there were 964 doctors in Texas who

had not returned their questionnaire, and who should have done so. Texas is accredited with 6,818 practicing physicians. That leaves a percentage of accomplishment of 80.9. These figures boost our average considerably above the last report, but it leaves us in about the center of the percentage column of all of the states. We deserve to do better than that.

Perhaps it is well to again call attention to the program agreed upon by the American Medical Association House of Delegates, and the office of the Surgeon General of the United States Army, at our last annual session. There are ten points to be considered, as follows:

1. The American Medical Association to be asked to conduct a survey of the medical profession through its state and local activities.

2. Each local or county society to canvass its members to determine, of those who express a willingness to serve, who should be available for the military service and who, on account of their age, physical disability or commitment in civil capacities, should remain at home.

3. The county society to give to each one who expresses his willingness to serve, even though he may be selected to remain at home, a button similar to that which was designed for the Volunteer Medical Service Corps during the last war.

4. The county society to list those who are selected for the military service according to their professional qualifications, listing as surgeons, psychiatrists, and so on, only those who are members in the national specialists' organization. Also to select from those who are to remain at home, qualified men for examination boards.

5. The state society to maintain an available roster of its members.

6. The American Medical Association to maintain a numerical roster of availability by states.

7. The Medical Department of the Army to have one or more selected officers on duty at headquarters, American Medical Association, in Chicago.

8. The War Department, Corps Areas or regional officers to call on the American Medical Association for physicians or specialists as and when required.

9. The American Medical Association to call on the states, according to their quotas, for the physicians required.

10. Each state, in turn, to call on its local societies for its quota of physicians.

The above mentioned questionnaire comprises the first and most important step in carrying out the plan agreed upon. Through the questionnaire it is hoped and expected that each reputable, competent physician in the United States will be assigned a place of immediate or prospective service, either in the armed forces of our country, in preparation or actual warfare, caring for the civilian population, rendering medical service to the rapidly expanding war industries, or making sure that our public health service is well cared for. It is hoped that each physician who will agree to serve somewhere can be given his choice of service, and that even in the service chosen he may be assigned duties agreeable to him and compatible to his knowledge and skill. As we have before said in these columns, the medical service was so sadly scrambled during the last World War that there was much to be desired both from the angle of the government and that of the individual physician.

There are those among us who feel that because of our age, or the condition of our health, or the demands made upon us at home, that we should not be called upon to serve anywhere, for which reason we do not answer the questionnaire pertaining to such matters which we have been requested to answer. The list of questions is designed to take care of just such situations. It must be remembered that the civilian population must continue to be served, and that field service with the armed forces lacks a lot of being the whole story. Eventually, and particularly should war obtain, all who have offered to serve in some capacity will be definitely assigned to duty, in accordance with this adaptability and opportunities, and each will be furnished with a button or insignia of some kind, indicative of his status as a volunteer. It will be worth something to be thus identified.

Questionnaire have been sent to 184,892 physicians in the United States and its possessions. Dealing in such large numbers, there will inevitably be inaccuracies in data, because of death, actual inability to practice, lost addresses, and the like, but even so, on December 31, last, 138,320 questionnaire had been received from physicians within the continental United States, a percentage of 79, and 1,483 from outlying territories and possessions, which is 30 per cent of that group. We haven't the figures for any later date, but undoubtedly the percentage of returns has increased materially in the past month.

Texas is in the Eighth Corps Area, with Arizona, Colorado, New Mexico and Oklahoma. Arizona leads in a percentage of return of questionnaire, with 92.9. Oklahoma is next with 88.8; then Colorado, with 85.5; New Mexico, with 84.5, and Texas, with 80.9. These figures are as of December 31.

During the last war emergency, a definite plan was followed in getting the entire medical profession to work. It lacked many of the good points included in the present plan. It particularly lacked any effort to get all of the round pegs in round holes, and square pegs in square holes, thus satisfying all hands and the cook. One of the circular letters gotten out in this connection, at that time, has just come to our attention. It will be of interest in this connection. We quote:

"Dallas, Texas, Sept. 11, 1918.

"Dear Doctor:

"The scope of the VOLUNTEER MEDICAL SERVICE CORPS has been changed. It is the intention to ask EVERY LEGALIZED PRACTITIONER OF MEDICINE (men and women) not now in active army service to make application for membership.

"The Central Committee at Washington has been sending out application blanks (the white sheets). You are asked to fill this out at once and send it back to the Central Committee at Washington. This is to be done whether you have previously sent in the questionnaire (the pink sheet) or not.

"The Committee named below are the County Representatives of the Central Committee to aid in securing the applications. You can materially lighten its work by the following:

"1. Fill out the application blank and mail it at once. Then notify Dr. G. M. Hackler, 303 Southwestern Life Bldg., Dallas, Texas. Phone number, M-413 Bell.

"2. If you have not received a blank, phone either Dr. Hackler or any member of the Committee.

"We will have to see in person all who do not do this, and you can readily see what a job this will be if you do not coöperate with us. If there should be any one who does not sign the application, the Central Committee has instructed us to make a report stating the reason. We will be glad to supply you with any information we can in this matter.

"Yours for service,
"G. M. Hackler, Chairman,
"C. R. Hannah,
"A. W. Carnes,
"James J. Terrill."

INDICATIONS FOR COMBINING SERUM AND SULFAPYRIDINE IN PNEUMONIA

If the results obtained bv Harry F. Dowling, M. D., Theodore J. Abernathy, M. D., and Clarence R. Hartman, M. D., Washington, D. C., in a study to determine the efficacy of combining sulfapyridine with serum for the treatment of pneumonia are confirmed by other similar studies, they would suggest that every patient over 40 years of age seen within the first four days of the disease receive serum in addition to sulfapyridine, the three men report in *The Journal of the American Medical Association* for December 21.

"After the fourth day of the disease," the three physicians say, "the value of serum as an adjunct is less. In order to give the patient the benefit of every possible aid, however, massive doses of serum might be given along with sulfapyridine to severely ill patients seen later in the disease."

They recommend that sputum be obtained from every patient before the administration of sulfapyridine is started so that serum may be given whenever it is indicated as soon as the type of pneumonia is determined. "This is necessary," they say, "in order that the utmost advantage may be taken of the superior results achieved by the earliest possible administration of serum."

Their study involved a series of cases of pneumonia caused by pneumococci type I through Type VIII which were alternated for treatment with sulfapyridine alone and with sulfapyridine plus specific antipneumococcus serum.

"The mortality rate," the authors say, "was 12.5 per cent in the group receiving sulfapyridine alone and 9.8 per cent in the group receiving serum plus sulfapyridine."

They point out that if the type III cases are omitted (the outlook for this type of pneumonia being particularly poor) the corresponding figures are 9.2 and 4.5 per cent respectively.

TRAUMA TO THE HEART*

CLAUDE S. BECK, M. D.
CLEVELAND, OHIO

Wounds of the heart may be divided into two groups: penetrating and nonpenetrating wounds.

PENETRATING WOUNDS

These are the stab wounds and bullet wounds. Any part of the heart can be injured—ventricular wall, auricle, septum between ventricles or auricles, coronary vessels, conduction system, any of the valves and any of the great vessels at the base of the heart, and the pericardium. A foreign body can enter the heart through the skin, through the esophagus or through the venae cavae or pulmonary veins. Infection can be carried in from the outside. A thrombus can form in one of the cardiac chambers at the site of the wound. This thrombus can be swept into the lung or into the peripheral circulation. Hemorrhage can occur from the heart or from the great vessels. If the blood escapes from the pericardial cavity into the chest or into the mediastinum or to the outside, exsanguination can occur. Compression of the heart is produced if the blood does not escape and remains locked in the pericardial cavity.

The functional disturbances produced by cardiac trauma are dependent upon the structure or structures involved in the trauma. A septal lesion involving the bundle of His can produce heart block. If a leaf of the mitral valve is severed or if one of the chordae tendineae is severed, mitral insufficiency results. If a cardiac cavity is entered by a stab wound, bleeding may or may not occur. If the wound is small and enters obliquely into the ventricle, the wound will not emit blood. If a major coronary artery is severed, the ventricular wall supplied by the artery becomes ischemic and ventricular fibrillation occurs.

Diagnosis of Penetrating Wounds of the Heart.—The manifestations of penetrating cardiac injuries are variable. The clinical signs can be grouped as follows: (1) those produced by injury of the intrinsic structures of the heart, such as a valve, a coronary artery, the conduction system, etc.; (2) those produced by exsanguination, and (3) those produced by compression of the heart, figure 1. Severe injuries of intrinsic cardiac structures as a rule are immediately fatal, and the problem of diagnosis is not presented. Generally in such accidents the ventricles are thrown into fibrillation and death is immediate. If the injury to the heart is less severe, the patient will continue to live after

*From the Department of Surgery, Western Reserve University School of Medicine and the University Hospitals, Cleveland, Ohio.
*Address delivered before the Section on Surgery, State Medical Association of Texas, Dallas, May 14, 1940.

the accident, and the problems of diagnosis and treatment are presented. In many of these patients the heart will show no evidence of intrinsic cardiac damage. The signs are entirely those of exsanguination or compression. The blood escapes into the pleural cavity, into the mediastinum, into the pericardial cavity, or through the wound to the outside. The signs of exsanguination need not be discussed.

Treatment of Penetrating Cardiac Wounds.—Only brief discussion of this subject can be given. Most of the patients who reach the hospital alive require operation. Occasionally, a patient with a stab wound recovers without operation. The body must be kept warm. If the circulation has stopped or if it is feeble, intravenous fluid should be given while preparation for operation is made. If the respiration has stopped and if the patient has lost consciousness, urgent steps should be taken. It takes but a few moments to expose the heart and release the compression. When the patient begins to breathe, an anesthetic must be given while the surgeon is caring for the wound. For the less urgent operations an anesthetic is given before the operation is started and mechanical respiration is an added safeguard. An exposure to the left of the midline is usually used. If the wound is in the right side, an exposure to the right of the sternum is indicated. The pleural cavity is opened if necessary. The pericardium is opened and the blood clot is evacuated. This releases the compression and immediately the heart fills with blood. The first pulsations of the heart after release of the compression are more vigorous than normal, and the tasks of controlling the bleeding and repairing the wound must be met by the surgeon. The literature contains dramatic descriptions of the blood spurting, of the surgeon getting it in his eyes, of a foam rising up to cover the heart, of the patient regaining consciousness and moving on the table, of the heart muscle being torn when the wound was plugged by a finger, of sutures tearing through the heart muscle, of exsanguination, of a life saved or a life lost. The problems, difficult as they appear to be, can always be managed with satisfaction if a few facts are held in mind.

Hemorrhage from a ventricle must be controlled by placing a finger upon, but never in, the wound, figure 2. To keep the finger from slipping off the wound the heart is steadied by a suture in the apex. After the apex suture has been placed and after the index finger has been placed upon the wound, the urgency of the operation is over and time can be taken to carry out a satisfactory repair of the wound. Control sutures are placed on each side of the finger, crossed and held under moderate tension by the assistant. Then the finger is removed from the wound. There is no bleeding, and permanent sutures are placed. The control sutures and the apex suture are then removed.

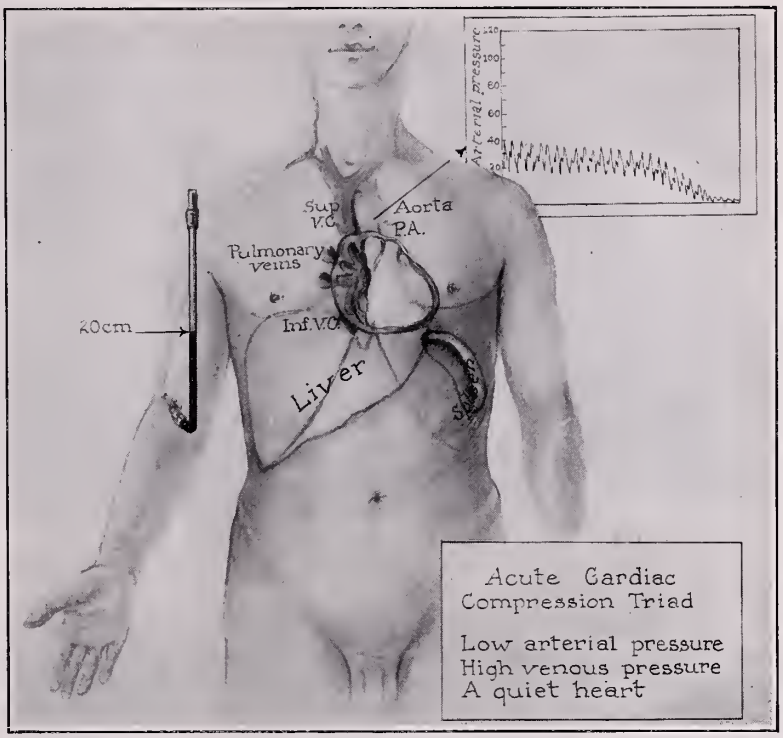

FIG. 1. Triad for acute compression of the heart.

An auricular wound cannot be controlled by this method. It can be repaired easily by taking the margin of the wound in clamps, bringing the margins together and then suturing the wound. It is impossible to stop bleeding from an auricular wound by placing a finger upon the wound. A hemostat will crush and break ventricular wall but will not do this to auricular wall.

NONPENETRATING WOUNDS OR CONTUSIONS OF THE HEART

These wounds are inflicted when the body falls from a great height or when an impact or heavy force is applied to the chest or

upper abdomen. The most common type of injury producing contusion of the heart is the steering wheel accident, figure 3. Another type of injury which produces contusion of the heart is the passage of a wheel over the chest or over the upper part of the abdomen. An impact by a fist, by a golf ball or by a horse's hoof can produce a contusion of the heart. Any part of the heart can be bruised, any of the chambers can be ruptured and any of the valves can be torn. Hemorrhage of variable degree occurs in the heart muscle when a contusive injury is received.

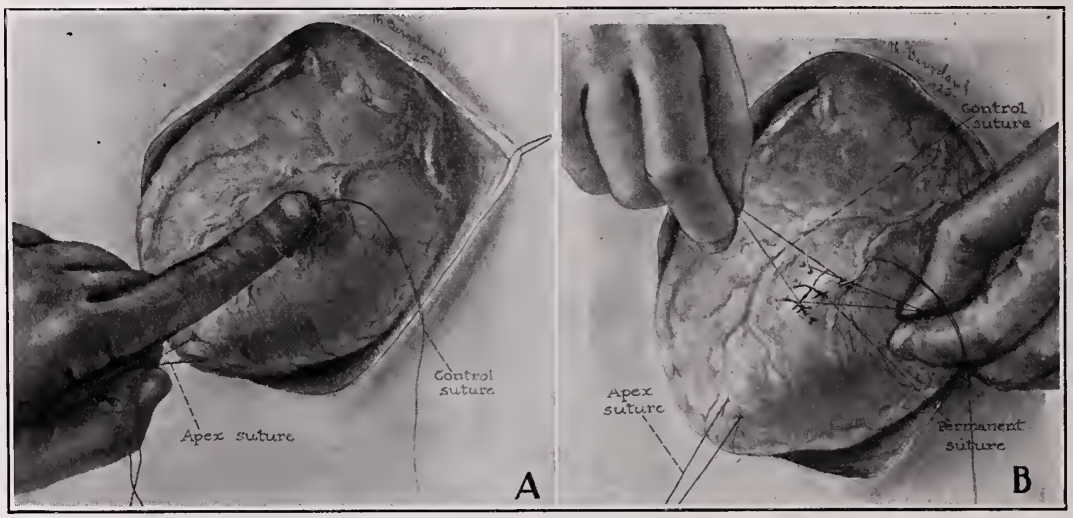

FIG. 2. Method of suturing a wound of the ventricle. *A* suture is placed in the apex of the heart so that the heart can be steadied and the finger can be held on the wound while the control sutures are being placed. In *B* the control sutures have been crossed, the finger has been removed, and the permanent sutures are being placed.

Areas of hemorrhage, contusion and laceration may occur, not only at the site of trauma, but elsewhere in the heart. These areas of hemorrhage can be multiple. The heart can be bruised without fracture of sternum or ribs. Indeed, there may be no demonstrable evidence of injury to the chest wall.

Rupture of the heart can occur in several ways. It can be ruptured as a toy balloon can be ruptured in one's hand by the application of sudden severe compression. One would expect that trauma of this nature would be more destructive if it should be applied at the end of diastole or at the beginning of systole when the heart is filled with blood. One would also expect this trauma to be more destructive if it should be applied from the base of the heart toward the apex so that the blood cannot escape as the heart is compressed. The heart can be ruptured by breaking open the friable myocardium. This can occur even though the heart is empty of blood. The heart can be ruptured by softening of the bruised area. Analysis of the literature shows that a high mortality occurs within the first few hours after the accident; however, if the mortality is calculated after the first nine hours after injury the chances of surviving the first week are better than the chances of surviving the second week. One would expect the greatest amount of softening of the injured myocardium to be present during the second week and this point should be given special consideration in the treatment of these cases so that such blow-outs of the heart may be avoided. Another mechanism by which the heart can be ruptured is by sudden distention with blood. This can occur when the blood is forcibly driven from the legs and abdomen as when the body is engulfed in a cave-in accident. Spontaneous rupture of the right auricle has been known to occur.

Incidence of Cardiac Contusions.—In 1935 Bright and Beck analyzed the literature on nonpenetrating injuries of the heart and found 152 instances of cardiac rupture, eleven instances of failure without rupture and twelve instances of recovery. In the recovery group the diagnosis was based upon clinical manifestations. According to this analysis, it appeared that when the human heart received a contusion, death was the rule and recovery was the exception. According to experimental data the heart can withstand an enormous amount of contusive trauma and recover. In the experiments recovery was the rule and death was the exception. We can conclude from these data that the group of human cases in which recovery took place was much smaller than it should have been. The clinical diagnosis of cardiac contusion is made too infrequently. It is my belief that contusions of the heart

are fairly common. I believe they are of more common occurrence than the penetrating wounds of the heart.

Symptoms and Diagnosis of Cardiac Contusions.—Weakness coming on after the accident is the most common symptom of cardiac contusion. When the contusion is produced experimentally there is a fall in arterial pressure, but as a rule the fall in pressure is of transient duration. In the less severe cases of contusion the weakness is momentary. The patient extracts himself from the wreck, sits down for a while and is then on his way. In cases of severe contusion the circulatory shock can be extreme. The patient may be unconscious, the arterial pressure may be low and the skin cold and clammy. Restlessness and air hunger may be present. Tachycardia is the rule, but bradycardia is sometimes present. Hemorrhage in the region of the bundle of His produces heart block. The heart sounds are distant and resemble the ticking of a watch. Auricular fibrillation, if it appears, is usually transient but it can be permanent and disabling. Precordial discomfort or pain is almost always present. It may be in the epigastrium or it may radiate into either arm. Vomiting sometimes occurs. The pain usually occurs immediately after the accident but it can occur after a latent period. It can grow worse over a period of days or weeks following the accident. It varies from a discomfort or ache to a sharp anginal pain.

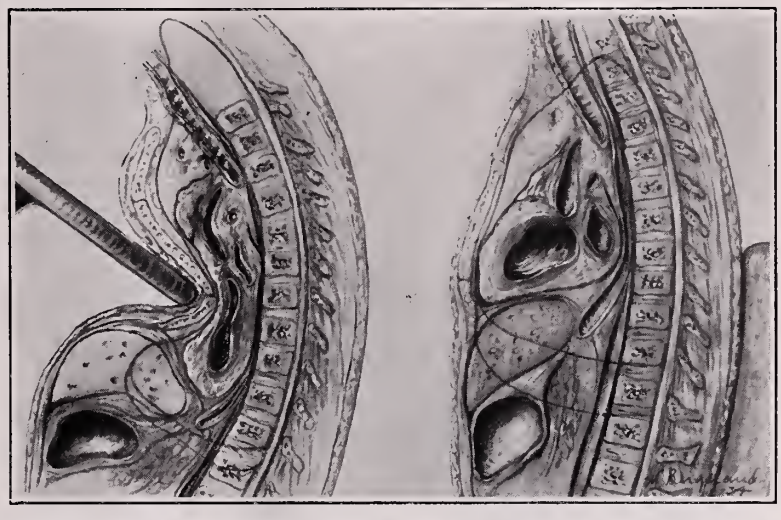

Fig. 3. The heart is compressed between the vertebrae posteriorly and the sternum anteriorly. This form of accident may be referred to as the steering wheel injury.

The electrocardiogram shows alterations from the normal. The QRS complex shows slurring and notching. Deep Q waves, large T waves, high take-off of T and inversion of T were frequently encountered in experimental studies. In our experiments these deviations from normal usually disappeared in the course of four to six weeks. The electrocardiographic changes that are due to hemorrhage disappear after the blood is absorbed. Those that are due to destruction of muscles are permanent.

The diagnosis of cardiac contusion not infrequently becomes a problem of patient versus insurance company. Some of these problems are extremely difficult to settle. For example, a man is thrown out of his seat in a train accident and strikes his chest against a seat. He dies a few hours later, and coronary sclerosis is found at autopsy examination. A woman, who never has had signs or symptoms of heart trouble, is thrown from the seat in an automobile accident. The lumbar muscles are bruised but she does not know whether or not she has struck her chest. Auricular fibrillation develops immediately after the accident. Later an embolus lodges in a femoral artery and the leg must be amputated. Did this patient sustain an injury to the heart producing auricular fibrillation or did the injury accentuate a cardiac lesion that was present but had not manifested itself, or was the injury entirely incidental?

Following is a brief summary of a case of cardiac contusion:

A delivery man for a bakery, 25 years of age, ran his truck into an automobile and demolished the front end of the truck. His chest was thrown forward against the steering wheel. He transferred his load of bakery goods into another truck and proceeded with the delivery. He worked the following day and experienced some upper abdominal pain. On the second day following the accident he experienced weakness and shortness of breath. He continued to work but on the fourth day consulted a physician. At that time he had dyspnea on exertion, pain in the chest, and a pulse rate of 120 per minute. Slight discoloration of the skin was found over the left seventh costal cartilage. On the eighth day following the accident, he worked fourteen hours but with great difficulty. The next day he was unable to work. His symptoms were weakness, dyspnea, pain in the chest and pain down the right arm. He again consulted his physician. He was kept in bed at home for seven days and in a hospital for ten days. He walked home and had to stop several times because of dyspnea and weakness. Blood stained sputum appeared. The heart dilated and signs of failure appeared. He died eighty-five days after the accident. Mural thrombi were found in the right ventricle and in the left ventricle, figure 4. Pulmonary emboli were found and these most probably originated from the mural thrombus in the

right ventricle. The seventh costal cartilage was broken. The heart wall directly beneath this cartilage had the thrombi. The accident sustained by this patient was a steering wheel injury which produced myocardial contusion, cardiac weakness, dyspnea and pain, mural thrombi, pulmonary emboli, cardiac failure and death.

Treatment of Cardiac Contusions.—The symptoms can be transient and recovery rapid. Weakness and tachycardia may require rest in bed. I have observed the ventricles go from a rapid ventricular tachycardia to ventricular fibrillation following contusive trauma. Quinidine should be given. Oxygen is indicated in the presence of dyspnea and cyanosis. Morphine and other sedatives should be used to induce rest and quiet. Softening of the bruised muscle takes place, especially in the second week,

FIG. 4. Drawing of mural thrombus in right ventricle following a steering wheel accident which produced cardiac contusion.

and there is a danger of rupture of the heart. Exertion is to be avoided. Straining at stool, coughing, etc., are to be avoided. Surgical intervention is indicated if rupture occurs. It seems that operation might have been feasible in some of the patients who died from rupture of the heart. In some of these instances, the bruised area was not so extensive but that sutures could have been placed to close the opening in a ventricle or auricle. A graft of fascia lata or parietal pericardium can be placed upon the contusion to prevent rupture and the formation of an aneurysm of the heart. Up to the present time this operation has not been done on the human heart. We have repaired by suture rupture of the heart produced experimentally and we have reinforced the heart wall by free grafts. The opportunity to do this operation is fleeting, but there are instances in which there is sufficient time to carry out such an operation.

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BLOOD DYSCRASIAS TREATED BY SPLENECTOMY*

HOWARD DUDGEON, JR., M. D.
WACO, TEXAS

The blood dyscrasias have always been of great interest to me. Especially fascinating, have been those which are treated by splenectomy. With each passing year we are becoming more familiar with these conditions. However, they are still comparatively rare and each practitioner will see only a few of these diseases.

Werlhelf, Denys, Hayem, Kaznelson, and A. O. Whipple have done a great deal of work on these conditions. Whipple is very active in this line of work at present.

The dyscrasias which are treated by splenectomy are: (1) primary purpura; (2) Banti's disease; (3) congenital hemolytic jaundice; (4) Gaucher's disease.

Primary Purpura.—Purpura is a condition characterized by extravasations of blood into the skin and mucous membrane, and, at times, by free bleeding from the mucous membranes. There are two types of purpura; primary and secondary. These must be differentiated as splenectomy is done only in the primary type.

Secondary purpura may be due to many causes: (1) Infectious diseases, such as typhoid fever, cerebrospinal fever, smallpox, etc.; (2) cachectic states; (3) certain drug intoxications, such as iodides, salicylates, arsenic, and many others; (4) liver disease in which there is extensive destruction of the parenchymatous tissue of the liver; (5) old age with arteriosclerosis; (6) vascular hypertension; (7) obstructed circulation; (8) nervous disorders; (9) inherited vulnerability of the capillaries. A careful history will usually differentiate primary from secondary purpura.

Primary purpura is diagnosed by ruling out secondary purpura in the history and by the following signs and symptoms: (1) free bleeding from the mucous membranes and extravasations into the soft tissues; (2) platelet count of less than 100,000 per cc. (3) abnormal prolongation of the bleeding time; (4) normal coagulation time; (5) non-retractile clot; (6) positive tourniquet test. In the last named procedure the blood pressure cuff

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is maintained at the diastolic pressure for five minutes; if purpuric spots appear distal to the cuff the test is positive.

The medical treatment of primary purpura has been very disappointing. However, unless the case is too acute, medical means should be employed. These are: snake venom, calcium, and vitamin C therapy, and small blood transfusions. The cause of primary purpura is unknown, but it is thought to be due to undue destruction of the platelets in the spleen. If medical means fail, the spleen should be removed. If possible, operation should be done in the chronic phase of the disease. In the chronic phase, A. O. Whipple has an operative mortality of 7 per cent; while in the acute there is 14 per cent. Unfortunately, it is not always possible to get the patient into the chronic phase—this is done by repeated small blood transfusions to build up the number of platelets.

A rare but often fatal complication is subarachnoid hemorrhage. I had the misfortune to have such a case last year with fatal outcome.

Following splenectomy there is a cure or complete relief of symptoms in 80 per cent of the cases. The 20 per cent uncured or unrelieved is due to error in diagnosis or to accessory spleen.

Banti's Disease.—The etiology of this condition is unknown, although it is thought by some to be due to a toxin, bacterial or otherwise, affecting the spleen. There is no proof of this theory. The condition is probably a clinical syndrome rather than a specific disease. It is characterized by splenomegaly, hypochromatic anemia, and a moderate leukopenia. In the late stages with the above symptoms there is ascites, hematemesis, and slight jaundice.

The first thorough study of the disease was made by Banti in 1883. The name splenic anemia is sometimes used but is not specific enough because several diseases may cause splenic anemia and, as Mayo says, "incomplete knowledge is essential to the diagnosis of Banti's disease."

The signs and symptoms may begin early in life as those of anemia, namely, weakness, dyspnea, and pallor. At times there is a discomfort in the left hypogastrium due to an enlarged, tender spleen. As the disease progresses there may appear ascites, slight jaundice, and hematemesis or massive melena in the late stages.

Summing up the signs and symptoms they are as follows, with regard to the early and late stages: Early—(1) splenic enlargement four to ten times normal size; (2) leukopenia; (3) hypochromatic anemia. Late and usually hopeless signs and symptoms due to far advanced liver damage are: (1) ascites; (2) jaundice, which is usually not marked, and (3) hematemesis, or massive melena.

The anatomical changes are confined to gradual enlargement of the spleen and liver. In the late stages the liver becomes contracted and fibrotic.

The treatment is surgical as medicine is of no avail. The patient should be built up with transfusions and the spleen removed. The prognosis depends on the stage of the disease in which the spleen is removed. If there has been marked liver damage the outlook is poor.

Banti described three stages of the disease, although these are by no means always clearly differentiated:

(1) A stage of enlargement of the spleen and a gradually developing secondary anemia lasting from three to twelve years.

(2) A short transitional stage in which the liver also becomes enlarged and the patient begins to go rapidly down hill.

(3) A terminal stage with atrophy of the liver, ascites, and cachexia. This stage lasts for one to two years and terminates fatally.

Operation in the first and early second stages gives good results, with an operative mortality of about 15 per cent. Operation in the late second stage gives a cure in moderate number, while in the third stage the results are very poor.

The most dangerous postoperative complication is mesenteric thrombosis due to the great increase in platelets following splenectomy. Heparin may be of value in preventing this complication.

Gaucher's disease can often be ruled out only after pathological examination of the splenic tissue.

Congenital Hemolytic Jaundice.—This is a chronic fluctuating type of jaundice due to increased fragility of the erythrocytes as demonstrated by their susceptibility to lysis in hypotonic salt solution. There are two types of this disease: one congenital and the other acquired. In the congenital type there is usually a life-long history of jaundice in preceding generations or in members of the same family. It occurs in both sexes and may be transmitted by either. A great amount of recent work has been done on this subject at the Columbia Presbyterian Medical Center.

The symptoms are those of anemia, which is confirmed by blood counts. The main sign is a light yellow jaundice, which varies in intensity from time to time. It may at times disappear. There is usually slight enlargement of the spleen. The increased fragility of the red blood cells is demonstrated by laboratory examination. The red blood cells usually

vary between two to four millions with the hemoglobin in the same proportion. There are always spherical erythrocytes present in the typical jaundice.

The anatomical changes are chiefly confined to increased activity of the cells of the reticulo-endothelial system. The bone marrow is hyperplastic.

The course is chronic. In some cases the patient may lead a normal life except for slight jaundice of the skin and sclera. In others there are frequently serious crises when the anemia may be acute and profound. It is during these periods that there is physical incapacity. Death may occur. This condition is often associated with gallstones.

Whipple and W. P. Thompson have proven that there is a typical or spherocytic jaundice and an atypical jaundice. Only the spherocytic jaundice is cured by splenectomy; the atypical is not only not cured, but usually is not even improved. Both have anemia, jaundice and splenomegaly. The diagnosis is made by laboratory examination for the increased fragility of the red blood cells and the presence of spherical cells in the blood smears which are found only in the typical or spherocytic hemolytic jaundice.

The treatment in the typical cases is splenectomy. As a rule, it may be said that we should avoid operation when the patient is going into a hemolytic crisis and perform splenectomy when the crisis is receding or in a free interval. However, this is not always possible as the crises may be very severe or recur so frequently as to leave no free intervals. In general, the patients stand the operation well, as the spleen, though often much enlarged, is seldom adherent and can usually be removed quite easily.

The mortality is about 5 per cent and the cure in the typical cases is about 85 per cent. Most failures are due to splenectomy being done in the atypical cases.

Gaucher's Disease.—Gaucher's disease is a rare, familial, congenital disturbance of lipoid metabolism affecting most commonly children, but it may affect young adults and even those of middle age. It is characterized by splenomegalia, occasional hepatomegalia and lymphadenopathy, marked chronicity, some cachexia, moderate hypochromatic anemia, pigmentation of the skin, occasional pingueculae and changes in the bones. The diagnosis is verified by finding in the affected organs a peculiar type of large cell, the Gaucher cell. This contains an excess of lipoid substance, kerasin, and is pathognomonic of the disease.

The disease was first described by Gaucher in 1882, and he considered it an "endothelioma of the spleen." It mainly affects children and young adults. However, a case is reported in which the patient was 60 years old. The youngest patient on record is one week of age. There have been about ninety cases reported in the literature.

The onset is slow. Often the first sign is the increased size of the abdomen due to the enlarged spleen. Occasionally these patients have large hemorrhages as in purpura. The weight of the enlarged spleen may cause discomfort. The enlarged liver is often palpable, but ascites is rare. The anemia is usually mild and rarely severe.

Pigmentation is rather characteristic and occurs early in the disease. It is usually irregular, spotty and diffuse in distribution and occurs most commonly on exposed parts of the body. The color is yellowish-brown. There is no jaundice. Yellowish, wedge-shaped elevations called pingueculae may be found in the conjunctivae, running from the cornea to the outer and inner canthus.

The bone changes are very important diagnostic points, but may not appear until late in the disease. Of all the bones in the body, the femur shows the most typical changes. In an early case the femur may be the only bone to change. In the lower end there are areas of rarefaction of varying sizes which in some cases are mixed with areas of sclerosis. This may give a "worm-eaten" or "punched-out" appearance. The cortex is thin and irregular. An interesting change is that of bilateral swelling or fullness of the shaft just above the condyles. This is more pronounced on the medial side.

All other bones may show areas of rarefaction and sclerosis. There may be spontaneous fractures. These bone changes are due to infiltration with Gaucher's cells.

The blood picture is one of hypochromatic anemia, mild leukopenia and sometimes a decrease of platelets to less than 100,000 per cc.

The diagnosis is made by the above listed signs and symptoms, blood picture, and, if possible, by splenic puncture or lymph gland biopsy to demonstrate Gaucher cells. Often Gaucher's disease in the adult is difficult to differentiate from Banti's disease. Unless a splenic puncture or lymph gland biopsy demonstrates Gaucher cells or bone changes are seen, the diagnosis must await the pathologist's report after splenectomy.

Medical or x-ray treatment is of no avail. Splenectomy offers the only hope of cure or palliation. Often the results are dramatic. The general well being of the patient is greatly improved. The blood picture usually returns to normal and there are seldom any more spontaneous hemorrhages.

Some writers claim that bone involvement

becomes more pronounced and extensive after splenectomy. However, in a personal communication from A. O. Whipple, he states:

"In regard to our cases of Gaucher's disease—we now have five of these. Two of them occurred in a sister and brother. The sister made a remarkable recovery and we have followed her now for a period of fourteen years without any evidences of recurrence or a continuation of the disease, although at the time we knew that she had an involvement of the head of the right femur. Her brother came in a year later with a very rapidly developing form of Gaucher's disease. The spleen was the largest that I had ever removed. He died four days after splenectomy with marked cholemia. The other two cases we followed for three years and one year with apparently an arrest of the process."

The indications for splenectomy are: anemia, the hemorrhagic diathesis, and the discomfort of a large spleen. Immediate operative mortality is about 20 per cent. Many of these patients live for years in good health with apparent cure or arrest of symptoms.

The treatment of Cooley's syndrome by splenectomy is not indicated.

SUMMARY

1. Blood dyscrasias treated by splenectomy are listed and discussed.

2. Cooley's syndrome is not treated by splenectomy.

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HYPOPHARYNGEAL DIVERTICULECTOMY COMBINED ONE STAGE OPERATION*

ANDREW B. SMALL, M. D.
AND
TOM BARR, M. D.
DALLAS, TEXAS

Pulsion diverticulum is localized pouching of the hypopharyngeal mucous membrane through a weak point in the inferior constrictor muscle of the pharynx. It could be termed a hernia of the hypopharynx which descends into the region of the upper esophagus.

Anatomy and Etiology.—The muscles of the posterior pharyngeal wall are the superior constrictor, which is overlapped by the middle constrictor, which in turn is overlapped by the inferior constrictor. The inferior constrictor muscle has been divided into two parts according to the direction taken by its muscular fibers: the upper portion, called the cricothyroid, with fibers coursing obliquely upward to meet in the midline, and the lower portion, called the cricopharyngeus, with fibers running horizontally. Between the oblique fibers and the horizontal fibers there is a triangular area through which most diverticula develop. Below the horizontal band of fibers, or cricopharyngeus, is found the circular muscle fibers of the esophagus. Jackson has called the cricopharyngeus muscle the "pharyngeal pinchcock."

The following points may be the site of origin of diverticulum:

(1) In the triangular weak area between the cricothyroid and the cricopharyngeus muscles, usually on the left side. This is the most common.

(2) The posterolateral wall of the pharnyx between the cricopharyngeus muscle and the circular fibers of the esophagus.

(3) Through the lower fibers of the inferior constrictor muscle (oblique portion) probably at the site of entrance or exit of vessels and nerves.

Jackson has reported six cases in which the triangular weak area was intact.

Chevalier Jackson is of the opinion that the active and chief causes of pulsion diverticulum are pressure from within exerted by swallowed food plus obstruction ahead. He further states that obstruction ahead is due to the failure of the cricopharyngeal pinchcock to open as it should in the deglutitory cycle.[1, 5, 6] For this to produce a diverticulum there must be a weak point in the supporting tissue.

*From the Departments of Surgery and Otolaryngology, Baylor University College of Medicine, Dallas, Texas.
*Read before the Section on Surgery, State Medical Association of Texas, Dallas, May 14, 1940.

Hasty eating probably plays a part. The dilatation which goes with swallowing a large bolus of food further weakens the particular weak point.

Harrington[3] has listed the several theories of etiology as follows: (1) neuromuscular; (2) from swallowing large bolus of food; and (3) muscular deficiency, where nerves and vessels enter and leave the muscle.

SYMPTOMS

The symptoms complained of by patients with hypopharyngeal diverticula are sometimes pathognomonic. Whether the diagnosis can be arrived at accurately from the history alone depends a great deal upon the stage in its development. Early, and when not large or fully developed, the symptoms will probably give a clue to the diagnosis. Later, when large and capable of holding more food and producing more pressure symptoms, the diagnosis can sometimes be made from the history alone.

The common symptoms are:

(1) *Dysphagia.*—Early in the history, food passes into the esophagus after the sac has filled. When larger, the pouch will encroach upon the lumen of the exophagus because of the unyielding vertebra posteriorly. Some patients can swallow certain foods with comparative ease; others can take only liquids.

(2) *Vomiting* is a frequent complaint. It is more of a regurgitation from the pouch. The food frequently comes back into the mouth in the same physical state as when swallowed. It is not sour, or bitter, as food which has been acted upon by gastric juices. As time goes on and food particles stay in the sac there will be partial digestion and a foul odor to the breath.

(3) *Noisy Deglutition.*—There is frequently gurgling, bubbling and rumbling of gas. The patients often tell us this troubles them more than any other symptom. They refuse to eat with anyone except members of the family.

(4) *Hoarseness* is sometimes noted. It is intermittent and variable, probably due to pressure directly on the larynx, or on the recurrent laryngeal nerves.

(5) *A tumor* is more often palpated by the patient than by his physician.

(6) *Loss of weight* is noted in almost every case. As soon as the sac reaches such a size as to hold most of the food eaten and then obstruct the esophagus the patient begins to lose weight. Sometimes the weight loss is alarming.

(7) *Cough* is due to spilling over into the larynx.

As previously mentioned the diagnosis can be suspected from the history but must be corroborated by x-ray study and endoscopic examination.

The most common physical signs are:

1. Regurgitation of food into the pharynx by digital pressure over the sac.

2. Boyce sign, or air bubble test. This is elicited after instructing the patient to swallow two or three times, partially filling the sac with air. The examiner then places his ear close to the patient's open mouth, and with digital pressure over the sac an air bubble can be heard.

PROGNOSIS

Diverticula of the hypopharynx will not recover spontaneously and in all cases require surgical assistance for a cure. If left alone they tend to dilate and become larger, causing more symptoms until they endanger the life of the patients by loss of weight from esophageal obstruction, or aspiration pneumonia from the spill over into the trachea.

Jackson reports a 3 per cent mortality on good surgical risks.[5] The morbidity is one and one-half to two weeks and the danger of mediastinitis is minimum.

PREOPERATIVE PREPARATION

Even though the diagnosis is obvious from history and physical findings, x-ray examination should be made. No patient should be operated upon without a preliminary endoscopic examination. This will give all information necessary regarding site of origin, course and direction of sac, aspiration of sac contents and rule out other conditions.

Patients are sent to the hospital and made to swallow a number 15 twisted silk surgical thread with lead beads on one end. This is absolutely necessary as a guide to the true esophageal opening which must be found immediately during the operation.

It may take the patient several days to successfully swallow this string. Many times it enters the sac, rolls up and is later vomited due to hasty swallowing. There is no alternative but to have him attempt to swallow it again. The location of the string may be verified by fluoroscopic examination or by simply pulling on it. If it is rolled up with the sac it is easily removed. If it is in the esophagus or stomach one can easily feel resistance and pull at the lower end.

If the patient is undernourished a feeding tube may now be introduced and the patient fed for several days prior to operation. Intravenous fluids may be administered.

TECHNIQUE OF OPERATION

Local anesthesia is used. A transverse incision is made at the level of the cricoid cartilage, about 5 cm. long. The platysma and deep fascia are severed. The sternomastoid muscle is retracted laterally. The lateral

thyroid vein is clamped, cut and ligated. The thyroid gland is retracted medially. Blunt dissection and separation is carried down to the tracheo-esophageal angle. The common carotid artery, jugular vein and vagus nerve are retracted laterally. The esophagus is clearly visualized.

An 8 mm. esophagoscope is introduced into the sac, which is aspirated and illuminated. The sac is separated from surrounding tissues bluntly, and its fundus is delivered into the incision. The esophagoscope is withdrawn from the sac and inserted into the true esophagus over the string. Careful dissection is carried out about the neck of the sac; all muscle fibers are retracted. Two stay sutures are put into the neck of the sac, which is then cut with small iris scissors in sections across its neck. As the neck of the sac is cut the edges are touched with tincture of iodine and immediately closed with a running lock stitch suture of chromic gut. At this stage of operation the sac should be removed and the neck of the sac tightly closed with the lock stitched suture referred to.

The suture line is now inverted with interrupted mattress sutures of fine black silk. The fibers of the cricopharyngeus and inferior constrictor muscles are then united with fine black silk.

A split rubber drain is carried down to the closed pharyngeal muscles. No attempt is made to close any layer except the skin, which is united with interrupted equisetine.

The endosocoptist now cuts the string and the patient swallows it. A Levin duodenal tube is then introduced through the endoscope into the stomach.

The patient is placed in bed with a low back rest, which may be elevated to a semi-sitting position the next day. He is encouraged not to swallow saliva but to expectorate even the slightest secretion for seven days.

One thousand cubic centimeters of glucose in saline is given by vein every eight hours. He is allowed to wash his mouth with water or antiseptic solution.

The drains remain in forty-eight hours.

After forty-eight hours about one ounce of saline is introduced through the nasal tube. If there are no bad effects from this, the amount of saline thus introduced is gradually increased up to eight ounces at regular intervals. Other fluids are then given by tube, such as fruit juices, clear broths, soups and a high caloric milk formula at specified intervals. Care is always taken to wash the tube with water after each feeding to prevent obstruction. After three days the intravenous fluids are discontinued.

On the tenth day a small amount of water (two drams) is given by mouth. After several hours if no change is noted the feeding tube is removed and a liquid diet is instituted. The diet is continued for six weeks. Patients are cautioned about swallowing large amounts of fluids. We attempt to explain that they should be careful and they are usually willing to coöperate.

At the end of six weeks the diet is increased by adding soft eggs, custards, cream of wheat, grits, rice, mashed potatoes and pureed vegetables. At two or three months an endoscopic check up is made.

CASE REPORTS

CASE 1. Mrs. C. H. W., age 45 years, had noticed the following symptoms for about two years, which had been worse for the past six months: a mass in the neck; difficulty in swallowing; choking and spitting up. Her maximum weight, shortly before the symptoms became exaggerated, had been 145 pounds. At the time of admission to the hospital on May 30, 1939, her weight was 110 pounds.

Esophagoscopy on June 10, 1939, by one of us* showed a pouch at the cricopharyngeus coming off posteriorly and to the left side. On June 13, 1939, a combined one stage diverticulectomy was done. The patient left the hospital on June 22, 1939. She was last seen in the office May 4, 1940. She is now in fine health, and has had no trouble eating solid or liquid food. The present weight is 123 pounds.

CASE 2. Mr. W. F. T., a white man, aged 54, had symptoms for about two years. For the past six or eight months before he was seen these symptoms had been much worse. He complained of spitting up, difficulty in swallowing, pressure in the neck, gurgling and noisy eating, and weight loss from 210 to 155 pounds. He remarked that it was so embarrassing for him to eat that he refused to do so in the company of other people. His weight loss had been so great and his strength was failing so rapidly that he had been forced to give up his business.

On September 1, 1939, a combined one stage diverticulectomy was done. On October 10, 1939, he had gained 14 pounds in weight, felt fine, and was eating solids and liquids without difficulty.

CONCLUSION

In the presentation of this subject with a report of two cases in which patients were successfully operated upon by the combined one stage operation, we have not attempted to give anything new or original. Our purpose was to review the subject of hypopharyngeal diverticulum, giving symptoms, signs and methods of diagnosis.

Our technique of operation is essentially that of Jackson and Babcock[1], a modification of the original described by Jackson and Gaub in 1915.[4]

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1717 Pacific Avenue.

ABSTRACT OF DISCUSSION

Dr. Robert Shaw, Dallas: I have thoroughly enjoyed this excellent paper by Drs. Small and Barr. As they have pointed out there is a surgical regime available which will completely cure this distressing condition. The fact that there is a mortality percentage at all is due not so much to the operation or its complications, but to the advanced age of the patients having pulsion diverticula. There has been a friendly debate between the advocates of one stage and two stage operations in the surgical correction of esophageal diverticula. The first stage of the two stage procedure consists of freeing the sac and the suturing it up to the ribbon muscles so that the mouth of the sac is dependent. At the second stage the sac is again freed and cut away at its neck. No attempt is made to close the esophagus, the wound being allowed to heal by granulation. The argument for the two stage procedure is that it prevents mediastinitis. The advocates of the one stage procedure counter with the statement that their patients do not develop mediastinitis, and their records bear them out. Furthermore, seldom does stenosis requiring dilatation occur following the one stage procedure, while this is a common complication with the use of the two stage technique. The coöperation of an endoscopist during this operation has been stressed and rightly so. The illumination of the sac and the better definition of the esophagus during its closure, due to the presence of the esophagoscope, facilitates the procedure and renders unlikely the development of a subsequent stenosis.

PROTECTION AGAINST X-RAY HAZARDS

"However safe x-ray equipment is made, it is a dangerous and lethal tool in the hands of the ignorant, careless or inexperienced operator," Lauriston S. Taylor, Ph. D., Washington, D. C., declares in *The Journal of the American Medical Association* for January 11 in a discussion of means and protection against possible harm from x-rays, published under the authority of the Council on Physical Therapy of the Association.

His article is aimed particularly at the protection of the x-ray operator. X-ray treatment rooms, he says, should be constructed of some protective material such as lead or concrete, or the walls should be covered with a special plaster. This affords protection to the operator, who remains outside the room.

Protection from "scattered rays," those which have been deviated from their course and thus fall elsewhere than directed, is as important as protection from direct rays but is too often ignored, Dr. Taylor points out.

The x-ray specialist should wear protective gloves and aprons, Dr. Taylor advises. He warns, however, that "the use of goggles and the like in a poorly protected room gives a false sense of security and may lead to carelessness and thus to injury."

For the protection of the patient it is essential to determine his "tolerance dose," the amount of x-ray energy that he may receive continuously or at repeated intervals without suffering any damage to the blood or reproductive organs.

"Education and the restriction of sales only to qualified people such as radiologists and technicians will probably go furthest in minimizing the hazards of x-ray equipment," the author says.

SO-CALLED OLD AGE STROKES

P. M. BASSEL, M. D.
AND
B. N. BLANTON, M. D.
TEMPLE, TEXAS

A symptom or a physical finding may be such an important condition that we, as physicians, content ourselves with its discovery and often fail to direct sufficient investigation to arrive at a proper etiological diagnosis. We have been frequently impressed that this is true in patients complaining of paresis or paralysis of some member. Especially is this the case in individuals in the age group that comprise the "so-called degenerative diseases." In answer to the inquiry, "What diagnosis has been made in your case?" we have heard so often the following replies: "strokes," "hemiplegia," "paralysis," and so forth, that we felt a discussion on a statistical basis would be valuable. We restricted the age group to patients past 40 years since younger patients seldom receive the diagnosis of a "stroke" with abandonment of further investigation.

We selected the patients over 40 reporting to the Clinic for the past ten years, whose chief complaint or important finding was paresis or paralysis. Only a few patients were seen during the acute phases of their disease, and any group of cases seen at the onset would undoubtedly present other diagnostic problems than those listed. For example, the acute alcoholics, toxic conditions, and many others are eliminated, although we realize these are important problems to the general practitioner. We have also not included the cases with fever such as "acute bacterial endocarditis with brain emboli, septicemias, acute encephalitis," and others, because the fever usually stimulates a diagnostic search. We also eliminated cases with peripheral nerve paralysis such as polyneuritis, sciatic pains, spinal cord tumors and metastatic neoplasms, as they are seldom confused with the so-called strokes.

TABLE 1

Diagnosis	Cases Studied
Vascular accidents	50
Brain tumor	47
Multiple sclerosis	16
Paralysis with syphilis	7
Amyotrophic lateral sclerosis	7
Subdural hematoma	1
Pressure ischemia	1
Total	129

Table 1 shows the number of cases studied and the final diagnosis. These data emphasize a very important finding, namely, that

*From the Department of Internal Medicine, Scott & White Clinic, Temple, Texas.
*Read before the Section on Medicine and Pediatrics, State Medical Association of Texas, Dallas, May 14, 1940.

vascular accidents comprise only 37 per cent and other conditions 63 per cent of that total.

The group diagnosed as multiple sclerosis gave the usual history and physical findings associated with this disease. It would indicate that this is a more common disease in this section than some reports indicate. In spite of the fact that most of the patients gave a history of repeated exacerbations with remissions, nearly all had been treated for "strokes."

There was nothing unusual in regard to the patients with amyotrophic lateral sclerosis except that they were often confused. Time does not permit a consideration of differential diagnosis.

The cases of syphilis only include those with a sudden onset of paralysis; general paresis and other syphilitic syndromes were eliminated. This appears frequently enough that every case should require serological study; as in these seven patients, there were no other methods to form a conclusion.

One patient, aged 78, with a subdural hematoma was brought in unconscious, and the meager history indicated an injury thought to be of small consequence two months prior. He had worked until seven days before entry to the clinic, at which time he began to be awkward on the right side. This weakness had been progressive and for several hours he had been in a stupor. Because of the history and findings, spinal puncture was done, showing marked increase in pressure. Immediate craniotomy was advised and performed with the removal of a large encapsulated hematoma. The patient is now in good health and has had no residual symptoms or signs.

A case classified as pressure ischemia was unusual and interesting. A man was cut along the left side of the neck severely. Bleeding was profuse, and a bystander grabbed a napkin and made extreme pressure over the neck vessels while an ambulance was called to remove him to the hospital. At operation the carotids and jugular vessels were found intact. The following day it was noted that the patient had a spastic hemiplegia on the right side. The temperature of the cheek and scalp was normal. We could explain this only as a pressure ischemia affecting the pyramidal cells. This case would indicate that prolonged and constant pressure on the exposed neck vessels can be a cause of hemiplegia.

The remainder of the discussion will deal largely with the first two and largest groups, namely, the vascular accidents and brain tumors. No attempt was made to classify the type of vascular accident, that is, as to whether it was due to hemorrhage or thrombosis.

The records were studied to see if the character of the symptoms would afford differentiation. Of course paralysis was present in every case studied. We found that in the "brain tumor" group the paralysis or paresis was sudden in onset in fourteen cases and gradual in twenty cases. In the vascular group the paralysis was sudden in forty-eight cases and gradual in two.

The parts involved were of diagnostic value, but by no means characteristic. In the brain tumor group, hemiplegia was present in sixteen and monoplegia in eighteen cases, while in thirteen the weakness was only subjective or transitory as elicited from the history. In the vascular group there were thirty-nine cases of hemiplegia and eleven with monoplegia.

The age was of little importance. In the vascular group there were twelve cases in the fourth decade, nineteen in the fifth and sixth. The brain tumor group showed an age distribution as follows: twenty cases in the fourth and fifth, and seven in the sixth decades.

The next most common symptom was headache. This was present in most of the cases. The description of the headache varied in each patient, but the character of discomfort is of some value in differentiation. The pain in the vascular group was more apt to appear during the day, after exertion or some emotional upset. The headaches of the brain tumor group were more apt to occur at night, awakening the patient from sleep, and were often benefited by stirring about. The headache was found more often to be localized rather than generalized. It was described as localized in thirty-two cases, generalized in ten, and no definite record in five cases.

One very important symptom, when it can be elicited, is convulsions. A history of convulsions was obtained in twenty-four cases of the brain tumor group and in only one of the vascular group. In twenty-three cases with tumor, the attacks were repeated. They were described as generalized in ten cases, and of the Jacksonian variety in twelve, and two had both generalized and localized seizures. This point seems to be corroborated by Cobb Pilcher and Edward F. Parker, Jr., as reported in the 1940 Year Book of Psychiatry and Neurology, who found only two cases of convulsions due to hemorrhage in a series of seventy-eight patients with verified intracranial lesions, all of whom had convulsions. We believe that either generalized or focal seizures are very uncommon in vascular acci-

dents associated with paralysis. We have seen several cases with a history of grand mal without paralysis whose encephalograms revealed marked cortical atrophy. This is probably on a vascular basis, but in the few patients observed we have not found one who later became paralyzed.

The physical findings are of importance. The blood pressure was above 150/100 in thirty-two cases believed to be due to vascular accidents and below this figure in eighteen cases. Several of the latter group gave a history of it having been higher on previous occasions. Only four of the brain tumor group had a blood pressure reading higher than the figure given.

The fundus should always be carefully checked. Choked disks were present in twelve cases with brain tumor and only one of the vascular group. Arteriosclerosis was much more prominent in the vascular group.

In spite of most careful neurological and physical examination, it is often impossible to be sure of the diagnosis. The laboratory must help. We believe that every case should have a fundus examination, frequently a roentgenogram of the skull, and careful serologic blood study. A spinal puncture should be done in questionable, selected cases, which should be carefully tested for pressure, and the necessary laboratory tests made. With all this it will be found compulsory at times to resort to air injections, either ventriculograms or encephalograms. We believe these procedures can be abused and are often advised in lieu of careful examination otherwise. In some cases their value is inestimable. These tests were performed in eleven of the above groups for diagnosis and tumors were found in seven. The following is an example of a case that requires an encephalogram, and without which would have been classified as vascular.

CASE REPORT

The patient, a man, aged 64, reported to the Clinic on July 5, 1939, with a chief complaint of weakness and sudden loss of consciousness two months prior to his visit. His history indicated that he was unconscious for twenty-four hours at the onset of his trouble. He was told that he had diabetes at the time and insulin therapy was instituted. Since that time he had continued to have headaches and was told that they were due to his high blood pressure. Examination revealed a blood pressure of 190/100. The fundi showed grade two sclerosis with no elevation of the disk. Because of the continuation of his symptoms and his headaches, which often awakened him in the morning since the onset of his trouble, he was advised to have an encephalogram and the report is, as follows:

"Encephalogram shows normal filling of the subarachnoid spaces at the base of the brain and around the convexity. There is incomplete filling of the right lateral ventricle near the anterior horn. The left lateral ventricle is normally filled and there is no displacement. These findings are suggestive of a tumor involving the right anterior horn. Since there is no displacement of the ventricular system, tumor or blood clot within the right ventricle should be considered."

He was advised to have surgery but refused it. The patient died two months later, apparently from a progressive lesion, according to a letter received from his wife.

We could show several examples of this type, but believe that this one case illustrates the necessity of encephalography in selected cases.

ABSTRACT OF DISCUSSION

Dr. Titus H. Harris, Galveston: When I first saw the title of this paper, I wondered what the authors could say about such an ordinary condition as old age strokes. But upon reading the paper, I found many interesting and important points in diagnosis had been brought out. For example, I was surprised to find such a small percentage, 37 per cent, of paralysis in the aged caused by vascular conditions. One would ordinarily think that by far the majority of paralysis due to cerebral lesions would be caused by vascular accidents. This perhaps inspired the writing of the paper and would emphasize the importance of careful and complete examination in this type of condition.

I am very much surprised to see such a large number of cases of multiple sclerosis, sixteen of the 129 cases studied. As the essayists have pointed out in the paper, multiple sclerosis is a rare disease in this part of the country, and it is a well known fact that this is a disease which generally begins between 20 and 40 years of age, and, therefore, it is all the more unusual that they have found so many cases in the old age group. I should like to ask the authors if these patients showed the classical signs of this disease or if the diagnosis was made more or less by exclusion.

Another point of importance mentioned in the paper is the need of spinal fluid examination to detect or eliminate the presence of neurosyphilis. I should like to stress this point further by stating that a negative blood Wassermann test is of no value in the presence of focal neurological signs, and, therefore, a spinal fluid examination should always be done in the type of case under discussion if syphilis is to be eliminated.

The need of keeping in mind a subdural hematoma has been mentioned. This condition may occur at any age and very often the preceding trauma may have been so slight as to pass unnoticed. It is sometimes very difficult to differentiate from tumor. It has been our experience to find the condition accidentally when we were investigating for tumor. It is more acute and more rapid in its progress than brain tumor and usually a history of trauma can be obtained. Its recognition is so important because of the excellent results to be had with surgery.

The authors have mentioned two very important points in differentiating brain tumors from vascular lesions. It must be remembered that brain tumors do not always cause increased intracranial pressure and that, after all, the most characteristic feature in a tumor is the slow progressive character of the focal symptoms. The two points referred to are: first, the fact that in tumor the paralysis is usually a slowly developing monoplegia, and in the case of a vascular lesion the paralysis is sudden and of a hemiplegic type. The reason for this, of course, is the usual occurrence of vascular lesions in vessels which supply the internal capsule where the fibers are compact and in the case of tumor the paralysis is due to gradual pressure or invasion in an area

where the fibers are less compact. Another point is the frequent occurrence of convulsions in the case of tumor and the rarity of convulsions in vascular lesions. This again would be the case, I believe, because the vascular lesion would most often occur within the deeper structures, while a cerebral tumor would commonly interfere with the cortical structures, thus giving rise to a cortical irritative process leading to convulsions. Time will not permit further discussion. Before closing, I want to compliment the authors on such a timely and practical paper.

CANCER OF THE UTERUS*

H. M. TIGERT, M. D., F. A. C. S.
NASHVILLE, TENNESSEE

In the month of March, 1940, The American Society for the Control of Cancer conducted a nation-wide campaign for cancer education.

In the United States cancer ranks second in the causes of death. At the present time the death rate is 106.3 per 100,000. It, therefore, seems appropriate to discuss a phase of the cancer problem, namely, cancer of the uterus. Almost one-third of all cancers in women occur in the uterus. Between 15,000 and 20,000 women die annually of cancer in this location. In uterine cancer the cervical incidence is much greater than in the body of the uterus, and also, much more fatal. It is probably four to six times more frequent. Anatomically, histologically and functionally, the body and the cervix of the uterus are widely different. This difference is particularly marked with respect to their mucosae. There is also a wide variation in their pathologic susceptibilities. Cancer of the body is almost invariably adenocarcinoma, whereas cancer of the cervix is nearly always the epidermoid type, frequently referred to as squamous cell, cauliflower, or fungating carcinoma. About 3 per cent of cervical malignancy is of the adenocarcinomatous type, which is somewhat milder than the epidermoid type. In the cervix the growth may spring from the vaginal mucous membrane of the cervix or from the endocervix, the latter form sometimes giving rise to an invasive type with excavation of the cervix and no visible external manifestations. Carcinoma of the uterine body occurs somewhat later than in the cervix and has a tendency to spread over the surface of the endometrium before penetrating the muscularis. Metastatic growths appear relatively late. The age incidence as compared to the cervical carcinoma is about ten years later, although cancer of the uterus may occur at almost any age. Gestation, because of its associated cervical lesions, seems to predispose to cancer of the cervix. This is not true with respect to the body since gestation apparently plays no important role. The incidence of cervical carcinoma rises after the thirty-fifth year; whereas in corporeal carcinoma there is a marked rise in incidence after the fiftieth year. Since many women develop cancer of the body of the uterus after the menopause, their attention is sharply challenged by bleeding from the uterus, and hence they are more likely to seek early medical aid. Cervical cancer is highly invasive, spreading by direct extension, by the lymphatic spaces and lymphatic vessels to adjacent glands and, in far advanced cases, by the blood stream. This, coupled with the high degree of malignancy, accounts for the greater seriousness of the disease when located in the cervix.

Briefly, the symptoms of carcinoma of the uterus are bleeding, vaginal discharge and pain. The latter two are usually present only when the disease is advanced.

If the patient has passed the menopause for six months or more and has uterine bleeding, the chances are over 50 per cent that it is due to cancer in the genital tract. This is true regardless of the character of the bleeding. When abnormal bleeding occurs prior to the menopause, and particularly after the thirty-fifth year, a diagnosis of cancer should be considered until the bleeding is positively proven to be due to other causes, such as hyperplasia of the endometrium, fibroid tumors, threatened or incomplete abortion, polyps, ectopic gestation, and so forth. Many of these cases can be diagnosed by a careful physical examination. One should always remember that cancer may be associated with other pathologic conditions of the uterus. Cancer of the body of the uterus is not infrequently associated with fibromyomata of the uterus. Norris and Vogt report 20.8 per cent of cases of cancer of the body of the uterus associated with fibromyomata, and Morrin and Max reported an incidence of 35.2 per cent. Uterine fibroids should not be accepted as a cause of uterine bleeding, or be treated by radium or deep ray therapy, without excluding the possibility of associated malignant disease of the uterus.

In cases of abnormal bleeding the question presents itself, has the patient cancer? If so, where? If in the cervix, what type? When present, how far advanced, and what treatment will be most efficient? Inspection of the vaginal cervix may reveal a cancerous growth. In every instance biopsy should be performed for confirmation of the diagnosis, and also to determine the character of the malignancy. In doubtful cases Schiller's test may be used advantageously to determine the location for the biopsy. This test is performed by applying ingol solution to the

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cervix and adjacent vagina. The normal mucous membrane stains dark brown because of its glycogen content, whereas, in cancer, glycogen is absent and the area stains only slightly or not at all. As a diagnostic measure in itself, the test is not reliable. In 1935 Hinselmann devised the colposcope, which magnifies the cervix from ten to forty-five times. From a practical standpoint this instrument has not yielded notable results. Biopsies are readily obtained in the office by the use of a biopsy forcep. Since the cervix is relatively insensitive, one may remove the desired tissue and seal the resulting abrasion with the cautery. For the determination of invasive types of carcinoma situated within the cervix, one must resort to the curette. The final determination of corporeal carcinoma usually rests upon a diagnostic curettage, which is best performed in a hospital. Having determined the presence of cancer, its location and its character, the anatomical extent should be ascertained.

A classification adopted by the League of Nations and endorsed by the American College of Surgeons, in substance and briefly, is as follows:

Stage 1. Growth is strictly limited to the cervix uteri (uterus mobile).

Stage 2. The lesions spreading into one or more fornices, with or without infiltration of the parametrium adjacent to the uterus, and the uterus retaining some degree of mobility.

Stage 3. Nodular infiltration of the parametria on one or both sides with limited mobility of the uterus. Infiltration of a large part of the vagina. Isolated metastases in pelvic glands or in the lower vagina.

Stage 4. Massive infiltration of parametria and involvement of the bladder or rectum. Extensive involvement of the vagina and remote metastases; in short, far advanced cases.

Epidermoid cervical carcinoma has been graded according to its malignancy into groups 1, 2, 3, and 4. However, it may be stated that, from a therapeutic standpoint, the extent of cervical carcinoma is of more practical importance than the grade. When diagnosed early while the extent of the malignancy is limited, with proper management one may expect a five-year survival of about one-third of the cervical cancers and about 70 per cent of corporeal cancers; whereas, if diagnosis is delayed and the pathology is extensive, the percentage of survivals drops to extremely low levels. In evaluating the extent, a general physical examination, associated with a bimanual examination of the internal generative organs, inspection of the cervix and vagina, and a rectal examination are essential. The inguinal and supraclavicular lymphatic glands should be carefully palpated. An x-ray examination of the lungs and the bones of the spine and pelvis, and a urologic examination should be made.

Cutler states that, "When one treats a patient with carcinoma of the cervix he must bear in mind that the failure of his treatment will in all probability eventually lead to a fatal involvement of the urinary system, and he will be more careful in evaluating the damage to the urinary system prior to therapy."

In malignancy of the cervix the bladder may become involved, giving rise to frequency of urination, and on cystoscopic examination there may be distortion of the bladder due to extravesical pressure. In some cases the bladder mucosa may present areas of congestion and sometimes submucous hemorrhages with marked areas of invasion in the bladder wall beneath. In 105 cases of carcinoma of the cervix with bladder complications Graves, *et al,* found cystoscopic evidence in twenty-three cases. In advanced cases vesicovaginal fistula may result. There may be ureteral and renal complications. "The natural termination of most cases of uterine carcinoma is through uremia by occlusion of the ureters." (Cutler). To determine the condition of the urinary tract in cases of cancer of the uterus an expert knowledge of urology is required. In many cases retrograde pyelography or intravenous urography will be necessary.

Various observers have studied the average time wasted before diagnosis and proper treatment in cases of uterine cancer. Patients do not usually consult physicians until symptoms suggesting carcinoma have been in existence from six to nine months, and it is further shown that after consulting the physician, an additional six months is wasted before adequate treatment is instituted.

In papers dealing with cancer the burden of the essayist's appeal is for earlier diagnosis, which appeal is so common as to be almost trite. Nevertheless, whether we like it or not, the fact remains that the cancer problem is still before us, and it is incumbent upon the medical profession to lessen its ravages. The amount of interest exhibited by the laity is encouraging, so that we may hope that eventually these patients will present themselves earlier. It remains for us to render more efficient service. The management of cancer of the uterus is no longer a one man's job. In my opinion this means the services of a gynecologist, a pathologist, a radiologist, and a urologist.

It is not my intention to enter the controversial field incident to the relative merits of surgery and irradiation, nor to suggest combinations of these agencies. Each have their place in the management of

uterine cancer. I might say that it is now rather generally believed by most radiologists and surgeons that irradiation offers the best treatment for most cervical cancers, and that surgery is best in selected cases of corporeal carcinoma. One of the most brilliant achievements in the field of radiology is the improvement of results in cases of cervical cancer. In recent times considerable advancement has been made in the treatment of fundal carcinoma by irradiation.

In conclusion I desire to emphasize the importance of the prevention of cervical carcinoma, which largely rests on the obstetrician and gynecologist. All benign cervical lesions should receive adequate treatment as soon as possible. It has been shown that cancer seldom develops in cervices which have been properly cauterized surgically for cervicitis.

Grossman states, "The development of cancer of the cervix without antecedent childbirth, curettage, or venereal infection must indeed be rare." He further states, in substance, that the steps to be taken for intelligent and effective prophylaxis are obvious: avoidance of unskilled midwifery, competent obstetrical attention at childbirth, prompt repair of birth trauma to the cervix, education of the public in the prevention of venereal diseases, thorough cervical cauterization for chronic cervicitis, and periodic manual and visual examination of the cervix. With such a program cancer of the cervix should become not only a relatively benign curable disease, but a rare disease as well.

706 Church Street.

DERMATITIS DUE TO NAIL POLISH MAY BE RELATIVELY COMMON

"Contact dermatitis (inflammatory skin eruptions) due to nail polish probably is more common than the number of reported cases indicates," Francis A. Ellis, M. D., Baltimore, and Hayden Kirby-Smith, M. D., Washington, D. C., declare in *The Journal of the American Medical Association* for January 4, in a report on five such cases.

The eruptions occurred chiefly about the face, eyelids, neck and arms. The surface of the fingers near the nails in some cases was not affected. This was probably due to the thickness of the skin of these areas, the authors explain.

From patch tests with the ingredients of nail polish they conclude that any ingredient may act as a sensitizer but that the more likely agents are the clear lacquer and the dyes. "A patient sensitized to one brand of nail polish at times may use with impunity another brand of polish or the same brand containing a different dye," they say.

Since their article was accepted for publication, the authors report, they have seen four additional patients with dermatitis on the face due to nail polish. All gave positive patch tests to a finger nail polish in contrast to those reported by Lester Hollander, M. D., in *The Journal* for November 16, 1940.

INTENSIVE IRRADIATION IN THE TREATMENT OF HYPERTHYROIDISM*

ROY G. GILES, M. D., F. A. C. R.
SAN ANTONIO, TEXAS

The committee on classification of the American Association for the study of goiter has recommended the following tentative classification:

1. Non-toxic diffuse goiter.
2. Toxic diffuse goiter.
3. Non-toxic nodular goiter.
4. Toxic nodular goiter.

This simple grouping is broad enough to include the different types of goiter under various other classifications, and is based on recognizable signs and symptoms.

The symptoms have usually been present for several months when the patient suffering from hyperthyroidism first consults his family physician. It is usually the responsibility of the family physician to differentiate certain clinical syndromes and to establish the correct diagnosis. It is well known that the patient suffering with hyperthyroidism often delays consultation with the family physician for fear he or she will be sent to the surgeon for an operation. In order to avoid such delays and to conserve the patient's energy, it seems advisable for the medical profession to keep in mind that the results obtained by irradiation are comparable to those obtained by any other method. When patients learn that not all cases of thyrotoxicosis require surgery, consultation with the family physician will be less likely delayed until cardiac damage has taken place.

The glands of internal secretion exert an influence upon the metabolic physiological process and upon each other, in such a manner that we can rarely regard toxic goiter as a disease of the thyroid alone. Recent investigations of Brown,[2] Marine,[11] Harrington,[6] and others have demonstrated the dependent relationship of the ductless gland system (thyroid, pituitary, adrenal, gonads, etc.), which earlier observers had more or less taken for granted.

Heinz Langer[10] states,

"That the autonomic nervous system is distinctly overirritated, either primarily or secondarily, due to overactivity of a certain group of glands of internal secretion, is not yet established. Some of the signs of overactivity of the vegetative nervous system are pruritis, exaggerated, perspiration, tachycardia, exophthalmos, diminished or excessive gastric secretion, diarrhea, nausea, vomiting, and irregularity of menstruation."

The lack of knowledge and understanding of the physiology of the thyroid gland and the fact that we do not know the exact cause of the disorder, renders any therapeutic ap-

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proach to the problem empirical. The clinician, the surgeon and the radiologist all claim cures.

The Value of Irradiation.—The value of irradiation in the treatment of hyperthyroidism has long been known to the experienced clinical irradiation therapist but recognition of this type of treatment by the profession has been slow. The literature is now so full of successful results in the treatment of hyperthyroidism by irradiation, that the value of this type of treatment is established beyond any doubt. Thousands of cases treated successfully by irradiation are now reported in the literature by many authors.[1]

Technique of Irradiation.—There is a great variation in the different methods of transportation into our cities and all are reasonably safe. It must be emphasized that the technique of irradiation therapy in hyperthyroidism likewise may vary a great deal and the ultimate result be the same. Nevertheless the irradiation treatment for hyperthyroidism should be strictly individualized for each case and should be carried out under the guidance of repeated metabolism. It is our experience that the skin of hyperthyroid patients is no more sensitive to irradiation than normal skin.

The interrelationship of the thyroid and thymus has been established by many investigators.[8a] Blackford and Freligh[8b] found hypertrophy of the thymus in 73 per cent of seventy-four cases of exophthalmic goiter. It was present in all patients under 40 years of age, and 50 per cent of those past 40.

The technique usually used is 200 kilovolts, 25 milliamperes, 50 cm. focal skin distance, with filtration of 1 mm. copper plus 2 mm. aluminum, 200 *r* to each side of the neck and over the posterior neck weekly until the patient has received from 1000 to 1200 *r*.

At the present time I am treating a series of cases with 200 kilovolts, 25 milliamperes, 50 cm. focal skin distance, with a filtration of 1 mm. of copper plus 2 mm. of aluminum, administering 33 *r* daily or 66 *r* every other day to each side of the neck as well as to the posterior neck until a total of from 990 *r* to 1320 *r* are administered during a period of four to eight weeks.

Objections to Irradiation.[1h]—Our attention has been called to the dangers from roentgen therapy in exophthalmic goiter since the advent of x-ray treatment. Experienced clinical irradiation therapists lay claim to the fact that the danger is far less than surgical risks. Varied arguments advanced by those who oppose the irradiation treatment of hyperthyroidism have been handed down from generation to generation as an indisputable self-evident axiom of truth.

Some of the objections to irradiation therapy may be listed as follows:

(1) Myxedema.
(2) Recurrences.
(3) Difficulty of subsequent operation.
(4) Exacerbation of symptoms.
(5) Slowness of response to irradiation.
(6) The question of permanent cardiac damage.
(7) Roentgen burns.
(8) Telangiectasis and skin atrophy.
(9) The danger of the development of carcinoma in toxic goiter.

Myxedema.—Harris[7] has shown conclusively that adequate doses of irradiation may be safely applied to the thyroid without producing either serious skin changes, or hypofunction of the normal thyroid or parathyroid.

Fritz Pordes[14] is of the opinion: (1) That an increased activity of the thyroid gland cannot be obtained by irradiation under any circumstances. (2) The normal thyroid gland shows little radiosensitivity and is not affected by the usual therapeutic doses used in the treatment of hyperthyroidism. (3) A pathologic increase in the function of the thyroid gland renders the organ more radiosensitive with the result that even the slightest hyperfunction can be well influenced by irradiation. In other words a much larger dose of irradiation is required to affect the normal thyroid than is given to cure hyperthyroidism. Reports by Pemberton,[13a] as well as by Joll[13c] and Walton bear out this fact. The theory of action of irradiation most commonly advanced by radiologists is that irradiation acts by inhibition or depression of the growth and function of the cells. It is obvious that irradiation is indicated only where there is an excessive secretion from the thyroid, that is, in hyperthyroidism.

The danger of myxedema has been exaggerated. Solomon and P. Gilbert[5] state that late injuries to the endocrine glands or myxedema has never been encountered. Pfahler[1h] does not report any cases of myxedema following his rather large series of 503 cases (1905 to 1937) treated by x-ray. Hypothyroidism was reported in four cases out of a total of 450 cases (1905 to 1937) but none in his series of eighty-three cases from 1933 to 1937 reported in January, 1940. Only one of the earlier cases was severe enough to require dessicated thyroid. The normal parathyroid glands are resistant to irradiation, and are not influenced by the amount of irradiation needed to control hyperthyroidism.

Recurrences.—Statistics indicate that recurrences are not more prevalent following irradiation than following surgery. Rose[15]

states the mortality in general is much higher than that reported by specially skilled surgeons. Hyman and Kessel[9] estimate the average mortality as over 10 per cent. Clarke and Black[3] express the opinion that the percentage of good results reported by surgeons is open to doubt because of a biased viewpoint in obtaining follow-up reports. For the same reason recurrences are more frequent than reported. Groover, Christie,[1c] *et al.*, report that 8.5 per cent of their 305 patients had previously been operated upon. Pfahler and Vastine[1i] report 8.3 per cent of their 235 patients were subsequently operated upon. Mennville[1e] has recently collected 10,541 cases from 75 sources, with 12 per cent failures, and 988 (9.3 per cent) received irradiation following recurrences from surgery. Thompson, Morris and Thompson reported 19.5 per cent recurrences in a series of 190 cases from the Massachusetts General Hospital. In a series of 4,956 patients operated upon at the Lahey Clinic, 306 (6.4 per cent) were for recurrences following surgery. Holzknecht[1d] includes the rapidly progressing cases with heart complications in neurotic individuals, and places the failures from irradiation at approximately 10 per cent. Jenkinson[1g] writes: "If irradiation fails to produce a cure, speaking now of the exophthalmic type, surgery in most cases is also a failure."

Difficulty of Subsequent Operation.—The criticism so frequently stated that irradiation therapy is followed by dense adhesions which increases the difficulty of subsequent surgical removal is not borne out by master surgeons like Lahey, Pemberton, Crile and Rogers. Newman and Garland[12] state: "Further, Lahey and others have shown that it is no more difficult to extirpate the thyroid should it be necessary, in patients who have had proper irradiation than in patients who have not been irradiated." From 1926 to 1928 a series of 4,061 patients with exophthalmic goiter were operated upon in the Mayo Clinic; (Pemberton[13a]) of this number 291, or 5 per cent, had been previously irradiated. Gross changes could be recognized in these glands only occasionally at operation. Broders was unable to distinguish irradiated from non-irradiated tissue microscopically. Stevens[12b] writes that Crile of Cleveland replied to a questionnaire as follows:

"Regarding your inquiry concerning the irradiation of thyroid cases, I have frequently operated on patients who have had long continued treatment and have noticed these patients, if the treatment has been long enough, may have adhesions which make resection somewhat difficult. The ordinary case, however, which has had x-ray treatment shows very little change as compared with other glands; as you say it might be due to thyroiditis. A great many of these cases also have hyperplastic glands, and these cases even without any treatment have been very difficult to dissect out."

Stevens states Dr. Rogers of New York City, received a like questionnaire and replied:

"I often have these cases x-rayed before and after operation and have never found the operation difficulty increased."

Pemberton[13b] in a series of 500 cases of exophthalmic goiter, stated that 11 per cent presented different degrees of thyroiditis. Not infrequently the operating surgeon may overlook a past or present thyroiditis and many of the so-called difficulties of operation are unquestionably due to an existing thyroiditis. The unjustified and mythical repeated statement that irradiation produces fibrosis, and renders operation more difficult, should never be made. If the cases are properly diagnosed and irradiation carefully done, surgery will seldom if ever be needed.

Exacerbations of Symptoms.—In my experience exacerbations of symptoms may occur without treatment and under no circumstances can increased activity of the thyroid gland be obtained by irradiation. In the very toxic cases, we must appreciate the necessity of enforced rest and indicated medical treatment such as iodine until the patient will tolerate the treatment and the treatment will control the hyperthyroidism.

Slowness of Response to Irradiation.—In the average case the surgeon should use at least two weeks for the preparation of his patient for operation, at least two weeks for the recovery of his patient from the operation, and four weeks for convalescence following operation; the total time consumed is eight weeks. Today with high voltage heavy filtered intensive x-rays, from 1,000 to 1,200 *r* may be administered to each portal in four to eight weeks with little or no skin reaction. The difference in time, therefore, is theoretical rather than real. Irradiation has its advantages since the activity of the gland may be checked by frequent metabolic determinations, and without doubt the final result is often controlled better than when the hyperfunctioning thyroid is removed at one sitting.

The Question of Permanent Cardiac Damage.—The response to irradiation as explained above may be slightly slower than when the gland is removed at one procedure but the difference in time is relative rather than real. Many patients fear the operation which too often leads to delay and may cause damage to the heart. Cecil states: "Fear of operation may raise the metabolism 50 per cent or more." If the patient, on the other hand, is treated by irradiation, most likely he will report for treatment before heart

damage has taken place. Holzknecht[1d] states: "Not one case is found in the literature proving that the prolonged period of irradiation resulted in unnecessary damage to the heart." Progress in cardiac damage may take place in cases treated by surgery. Willius[16a] says:

"At the time of initial examination at the Mayo Clinic, auricular fibrillation was found in 7 per cent of patients with exophthalmic goiter, and in 9 per cent of patients with hyperfunctioning adenoma. These percentages are doubled while the patient is under observation, that is, during the preoperative, operative and postoperative periods. Auricular fibrillation may occur as a permanent, intermittent or paroxysmal disorder."

Ernestene[16b] studied 1000 cases with hyperthyroidism and reported that auricular fibrillation occurs either in continuous form or in paroxysms of variable duration in 10 per cent and another 10 per cent develop auricular fibrillation two or three days after operation.

Roentgen Burns.—It is true roentgen ray burns did occur occasionally in the early days of irradiation therapy, when the methods were being developed and when the dosage was more or less a matter of speculation and could not be accurately measured. The "boogaboo" of roentgen ray burns has been a thing of the past for many years, in the hands of the experienced clinical irradiation therapist. X-ray burns today may be compared with leaving a sponge in the abdomen, and in this catastrophe the surgeon has failed to let a more or less constant mortality deter him.

Telangiectasis and Skin Atrophy.—These are dangers which had to be taken into consideration in the years gone by, before x-ray dosage was standardized. It seems that the occasional telangiectasis in less than 1 per cent of cases hardly constitutes a just condemnation of this method when compared to a surgical mortality of 1 to 3 per cent in the hands of the skilled, and 10 to 15 per cent in the hands of the less skilled, plus the recurrent and persistent cases of hyperthyroidism, as well as the cases of hypothyroidism, tetanies, recurrent laryngeal injuries, parathyroid damage, and the disfiguring scars which occasionally occur.

The Danger of the Development of Carcinoma in Toxic Goiter.—It is true that a fair number of adenomas contain malignant tissue but these are found in the non-toxic adenomas. (Pfahler[1h]). "In only one case out of a total of 501 cases of hyperthyroidism did carcinoma develop. This occurred in a female patient, age 64." It is stated by Cutler and Buschke[4] that "The hyperfunctioning thyroid rarely becomes the seat of cancer." No doubt the best possible proof that hyperfunctioning thyroids do not become the seat of cancer is that if any great number had developed in the past, this fact would be reported. This would suggest that possibly irradiation prevents the development of carcinoma or if carcinoma is present at the beginning of treatment the x-ray evidently stops the growth of the carcinoma. Everyone seems to recognize that carcinoma is usually sensitive to irradiation.

CONCLUSIONS

1. The clinical irradiation therapist who has had adequate experience in the treatment of hyperthyroidism, recognizes that the successful management involves the management of a human being, and not merely the dispensing of a remedy.

2. Early diagnosis and treatment are of prime importance in the treatment of goiter by any method.

3. The fear of operation is eliminated when the patient understands that certain types of goiters may be successfully treated by irradiation in place of surgery, and the patients are more likely to report for treatment early, and before cardiac damage has taken place.

4. The end-results with irradiation in the hands of the experienced clinical irradiation therapist are comparable with those obtained by any other method.

5. Irradiation is indicated in the following types of hyperthyroidism:

(a) All children and adolescents who do not respond to indicated medical treatment, with toxic diffuse and nodular goiters.

(b) X-ray treatment is the method of choice in all patients with mild symptoms who are under control and wish to avoid an operation with its attendant dangers, loss of time and expense.

(c) All patients who are poor surgical risks, patients with advanced disease or serious heart complications, may be treated by irradiation without additional shock and little or no inconvenience.

(d) Patients who refuse operation.

(e) Patients with recurrent postoperative symptoms which cannot be controlled by iodine.

(f) Substernal goiter accompanied by hyperthyroidism is a positive indication for irradiation.

(g) There remains a rather large group of patients in whom positive indications or contraindications for either surgical treatment or irradiation treatment are lacking. The advantages and disadvantages should be carefully and truthfully explained. It is impossible to overestimate the importance of indicated medical treatment, such as rest, the elimination of focal infection, etc., in the management of functional thyroid disease.

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302-306 Medical Arts Building.

ABSTRACT OF DISCUSSION

Dr. I. Warner Jenkins, Waco: Dr. Giles has covered the field of thyroid disease very well indeed. However, I think he was too liberal in his concluding remarks when he said, "The end-results, with radiation, are comparable with those obtained from surgery." After twenty years of treating toxic thyroid disease with x-ray, it is my opinion that such treatment is far superior, for it carries no hospitalization or mortality, and the patient's expense is cut in half. When surgery is employed the patient must be hospitalized and a mortality must be acknowledged. Then, too, surgical treatment often results in varying degrees of permanent nerve damage, and this is not true in the case of radiation.

I agree with Dr. Giles in that each case should be individually analyzed, for some may have focal infections, others a pluriglandular complication, and still others a neurogenic background. All these cases require different treatment if a permanent and satisfactory cure is to be effected. To advise operation only when an increased basal metabolism reading is present seems outmoded, in the light of our present day findings in physiology, endocrinology and pathology.

It occasionally takes me one or more weeks to make a diagnosis as to the exact etiology of toxic goiter. If I am unable to place the blame upon a focus, an associated endocrine imbalance or a neurologic responsibility, I do as the surgeon does and consider the disease from an empirical standpoint. Even in the cases which I am compelled to treat empirically, x-ray cures as big a percentage as does surgery, and with no mortality from treatment. In the possible 10 per cent of toxic thyroids with enough pressure symptoms to require surgical intervention, there is naturally a high mortality rate.

Dr. Jerome H. Smith, San Angelo: I enjoyed Dr. Giles' paper very much, as he covered this subject fully and emphasized many of the points which I think we are often prone to pass over very lightly. I fully realize it is very difficult to classify diseases of the thyroid gland definitely pathologically, because we so often find various changes occurring in the same gland. In other words, there may be a definite exophthalmic change and some colloidal type of change, together with questionable early adenoma, all in the same gland. This fact is undoubtedly the basis for some of the varied results obtained in the use of irradiation of the thyroid gland.

In the past it has been my experience that most of the thyroids which I have had the privilege of treating have, in most cases at least, been those in which either the surgeon or internist has tried all of his measures and has turned them over to the radiologist as a last resort. Of course this does not give the radiologist a fair chance to demonstrate definitely what can be done with irradiation. Some of the men who are working with me are gradually changing to the use of irradiation in many of their milder cases of thyroid and the results which we have obtained have certainly been satisfactory. I think the point that Dr. Giles has brought up is that the thyroid gland must not be considered singularly but rather as a part of the endocrine system and that many of the symptoms which we see in thyroid cases are not directly or wholly the result of the thyroid dysfunction, but are the result of improper balance of the function of the thyroid gland with the other ductless glands. This lack of proper balance probably accounts for a great many of the so-called symptoms of thyroid disease.

I fully agree with Dr. Giles that the technique and the amount of irradiation delivered in any one case varies greatly, as we have all experienced cases which responded very readily under light doses, while we have had other cases that were very obstinate and took rather heavy doses. I think the doses should be governed by the clinical picture. It is my method to start treatment with the use of two ports; my technique is three-quarters copper filter plus one aluminum, 50 cm. distance, 20 milliamperes, and using about 200 kilovolts. I start out by giving a treatment to one port, either the right or left side, and in about four or five days repeat the treatment on the other side. I carry this treatment on until the patient has received approximately 800 *r*. At this point I usually wait for a week or two and then run a basal metabolism test and see what change has taken place in the thyroid. I have not used the fractional method, in which small doses are given each day, as Dr. Giles indicated in his paper.

I wish to suggest to this section that the radiologist read more papers of this type in their county and district meetings. I believe that we can do some educational work and erase some of the erroneous

opinions which the general practitioner, internist, and surgeon have regarding irradiation of the thyroid gland. I feel that a better understanding among us as medical men of the benefits of irradiation of the thyroid gland in thyroid disease will prove beneficial to all of us. I realize that the radiologist fully understands all phases of therapy in thyroid disease, but unfortunately our surgeons and internists still think of some of the bad results which were obtained in the early treatment of this disease.

I again wish to thank Dr. Giles for the privilege of discussing his paper and to compliment him on the way in which he has covered this field.

Dr. R. H. Crockett, San Antonio: It is my impression that 200 kilovolts with 0.5 mm. copper is more effective in a larger percentage of cases of hyperthyroidism than when lower voltages and less filtration is used. I have used both methods for a number of years and now feel that the higher voltage and heavier filtration is the method of choice.

Dr. J. B. Johnson, Galveston: In this discussion Dr. Giles has brought to mind some old issues I thought were settled a good many years ago. For instance, I was under the impression that the issue was settled whereby radiation produced scar tissue or increased vascularity, making operative technic more difficult in cases that may come to the surgeon later. My observation is that few cases properly radiated ever come to surgery. I think we have decidedly more postoperative cases that require radiation, than cases that have had radiation and require surgery. One can easily by heavy radiation of the entire thyroid gland destroy all of its function, but it is my opinion that if the isthmus is protected, the patient will not have secretory deficiency. As a matter of fact, if they did, this deficiency would be comparable to total thyroidectomy. The patient could be placed on proper dosage of thyroid extract, causing little inconvenience. I cannot remember having seen an x-ray burn in a thyroid case in years, and with modern technic and knowledge this should not be considered as a hazard. The fact still stands that surgery and radiation are two well known and acknowledged methods of treating goiter and the percentage of cures are about the same, with the least hazard going with radiation.

MEANING OF THE TERMS 'COLD BLOODED' AND 'WARM BLOODED'

Explaining the meaning of the terms "cold blooded" and "warm blooded" in their relation to cold endurance, *Hygeia, The Health Magazine* says: "These are popular terms but they do not mean what they say. Warm blooded animals are those whose body temperature is maintained at the same level regardless of outside temperature. A better name for them would be 'constant temperature animals.'

"Cold blooded animals are those whose temperature varies with the environment. They are able to sustain life in cold weather by adapting themselves to the low temperature through a variation of body temperature to correspond with outside temperature. In cold weather they will be sluggish and in some instances appear to be dead.

"Among human beings differences in ability to withstand cold are determined in part by the amount of fat immediately under the skin. Because they are better equipped in this respect, women withstand cold better than men. In general, fat individuals feel the cold less than lean persons. Another factor is the rate at which body chemistry proceeds. This is governed largely by the thyroid gland."

IS THE OPERATION FOR SENILE CATARACT ON AN AMBULATORY PATIENT JUSTIFIABLE?*

JOHN H. BURLESON, M. D.
AND
M. W. McCURDY, M. D.
SAN ANTONIO, TEXAS

From time to time some procedure is proposed that makes for the simplification of operative technique and the care of cataract cases. All the seemingly radical or unusual departures from established methods always meet with criticism, if not open hostility, and we shall not be surprised if the suggestions we shall make are received in this manner.

The evolution in operative technique and after-care since is quite astonishing. We well remember the first visit Colonel Smith made to America to demonstrate his intracapsular removal of cataract, his corneal incision—boldly pushing out the lens and, incidentally, often vitreous. The astonishment and horror of some of us timid brethren of ophthalmology, who witnessed his operations is recalled. Far be it for us to criticize Colonel Smith; such is not our intention. He was a distinguished surgeon, and from his idea has evolved what in our opinion is the best operation for the removal of senile cataract—intracapsular extraction.

We are not presumptuous enough to undertake to instruct a group of specialists how to operate; our purpose is to mark some milestones that we have passed along the way. Cataract extraction has most certainly been greatly simplified in recent years. Manifestly, an attempt to review all the details involved in different methods would be foolish. We hope to choose some of those most likely to need attention.

A natural ability to execute with delicacy and precision (coördination) is a natural gift, similar to being born a musician or painter. However, much skill can be acquired by intelligent training. How many of us have noticed the best surgeons always seem to have an easy time and why?

First, preparation of the patient. Every patient is entitled to a careful physical examination before anything is done. Every source of possible focal infection has been checked, any constitutional disease likely to complicate operative results evaluated.

Second, no pains have been spared to have everything relating to technique arranged before starting to operate. For example, it is important to see clearly what we propose to do. This of course means good light, suitable glasses for the operator in case they are

*Read before the Section on Eye, Ear, Nose and Throat, State Medical Association of Texas, Dallas, May 15, 1940.

needed, a good knife, and all instruments likely to be required. Nothing is more embarrassing than to find in the middle of an operation some important instrument is not on the stand. All operators of much experience can recall complications that could have been prevented with proper care—we mean errors of omission rather than commission. No two operators of equal experience would use the same methods of safety, yet working under similar conditions their methods would not be far apart. Our own technique is the result of training as a student, reading, and the adoption of those milestone suggestions presented along the road of experience.

Preparation of the Patient.—A bad acting patient is, in the vast majority of cases, the fault of his physician and the most prolific cause of mechanical complications. No patient should be operated on for cataract without full knowledge, if of sufficient mentality, of just what is going to be done and with the perfect assurance that there will be no pain. If time will permit, practice in training the patient to look in a given direction is a help in coöperation. We do not require a smear from the conjunctival sac, which we regard as a sterile cavity. In the presence of inflammation or disease of the lacrimal apparatus, one is not justified in operating.

If possible we have the patient spend the night in the hospital. A laxative is given, followed by an early morning enema. Three grains of sodium amytal is given to insure a good night's rest and to allay nervousness. Two hours before operating, two drops of 1 per cent solution of atropine is instilled into the conjunctival sac at fifteen-minute intervals for three applications to insure good dilatation which, in our opinion, is quite important and also simplifies the operation. Two hours before operation, another dose of sodium amytal is given.

We have three approaches in preparing a patient for operation: the use of barbiturates, which produce mental anesthesia; topical and hypodermic applications of local anesthesia to the conjunctiva, which destroys sensation; and paralysis of the orbicularis muscle to prevent squeezing. We use the method of O'Brien. When this has been correctly done, one can handle his patient without fear. A patient thus prepared can be operated on without trauma.

We shall not dwell upon the steps of cataract extraction, only to say we do an iridectomy, use a large conjunctival flap, and conjunctival stitches applied before the lens is delivered. We always attempt the intracapsular delivery after the modifications suggested by Knapp, O'Brien, and others. We are firm believers in the value of stitches, a routine with us. We would feel guilty of neglect if we should do without them.

We have now come to the third stage of cataract care, and the purpose of our remarks—the after-treatment. A patient operated upon under the outline proposed should have no traumatism. The most frequent cause of postoperative complications are inflammation caused by traumatism. Iritic involvement is nearly always the result of failure to remove all the lens capsule, together with probably a small amount of cortical substance. This sometimes will happen in the hands of the most skillful operator. It is our custom to follow the delivery of the lens with a thorough irrigation of the anterior chamber, and the removal of any remaining capsule, with forceps. In the removal of the lens in capsule, we follow the technique recommended by Lancaster: After grasping the lens at its lower border, counter pressure is made on the outside of the globe. This makes the capsule easier to grasp with the forceps and the zonule seems to break easier. After the toilet of the anterior chamber is completed, we replace the iris angles and tie our stitches with black silk or triple naught catgut—either is equally good. The gut has the advantage of not having to be removed; if silk is used we remove it on the fifth day. The conjunctival sac is now filled with 1 per cent atropine ointment and an ointment of butyn and metaphen.

The next step in the toilet is to close the lids, which are held in place by court plaster (not adhesive). The only operator we ever saw use this plaster was Herman Knapp and one of us* has followed this method since his student days. Both eyes are now covered with a light pressure bandage; the operated eye is further protected with a metal shield. If the patient is a clinic case, he is removed to the emergency ward for three or four hours and then allowed to go home—often walking a distance of several blocks. He is told to remain quiet and stay in the house and return for dressing on the third day. It has long been our practice never to remove a dressing under three days, in either a private or clinic patient, unless they complain. To continually look at an operated eye, in our opinion, is meddlesome surgery. From our experience with clinic patients, we have become convinced that more liberty given our private patients is not only justified but helpful.

When a patient is removed from the operating room, he is placed in bed in an upright position at any angle he prefers for comfort. In a few hours he is allowed to turn on either side, his back is rubbed, and he is allowed to move in any position he desires. Most of

*Dr. Burleson.

these patients are feeble, old persons, many of them men who have difficulty in voiding while lying down. They are allowed to get up and stand beside the bed to void or to go to the bathroom if necessary. We have found they do better and that by so doing no damage results to the eye. Many of our patients leave the hospital and return to their homes in five days.

We do not assert that cataract extraction is an ambulatory operation, but we do say that it is a safe procedure under circumstances that make it necessary.

Our experience in treating cataract extraction cases as ambulatory may be cited as another example that necessity is often the mother of invention. It was begun through a failure to get cataract patients into a general hospital for operation, because the wards are devoted principally to emergency surgery and medicine.

Preliminary work on ambulatory cases is the same as we usually do for other cataract cases: blood Wassermann test, urinalysis, blood pressure estimation, as a part of the systemic examination; and, secondly, the local examination comprises careful inspection of lids, conjunctiva, lacrimal sac, anterior chamber; and lastly, an estimate of light projection.

Postoperative Care.—The eyes are bandaged forty-eight hours, at the end of which time dressing is done and 1 per cent atropine instilled into the operated eye, and the free eye uncovered. If hemorrhage is present, turbid aqueous or lens capsule fragments are noted in the anterior chamber, 10 cc. of sterile milk is given.

The eye is dressed again after forty-eight hours (fourth day) and noted carefully for signs of uveal irritation, hyphemia, or bulging of the operative wound. The condition presenting is treated expectantly or actively.

Further postoperative routine comprises dressing every forty-eight hours until the operative wound is well healed. Most cases show this between eight and twelve days. After the patch dressing is removed, smoked glasses are given and the eye treated as indicated by its condition. At three weeks to one month, a plus 10 sphere is placed before the eye and if the patient has good object vision his result is considered satisfactory and he is instructed to report at monthly intervals for a time.

A conservative estimate of the number of cataracts operated on with this procedure is sixty. Of this number, at least fifty to fifty-two patients have serviceable eyes, that is, object vision with a plus 10 sphere. The remaining eight patients have lost the eye as a result of chronic uveitis, postoperative infection of a gaping wound resulting in enophthalmitis or phthisis, or massive postoperative hemorrhage with subsequent glaucoma, later becoming absolute.

A brief review of six representative cases is herewith included.

CASE REPORTS

CASE 1.—The patient was a Mexican woman, age 60, with a diagnosis of chronic, simple glaucoma and senile cataract in both eyes.

The right eye was operated on October 22, 1938; a large conjunctival flap and two stitches were used. The postoperative course was uneventful, the stitches being removed October 29. Fundus examination showed glaucomatous excavation and optic atrophy. On April 29, the right eye was clear and the tension normal.

The left eye was operated on November 22, with the same technique as stated for the right eye. The stitches were removed on November 29, at which time the anterior chamber was clear, the wound flat, and a small central pupil was enclosed by a post lens capsule. Fundus examination showed a nerve head of good color, with only slight cupping. On November 25, vision in the left eye, with a plus 10 sphere, showed objects at twenty feet. On April 12, the tension of the left eye was normal. There was no further growth after the cataract extraction in this eye.

CASE 2.—The patient was a negro woman, aged 57, with a diagnosis of mature senile cataract in both eyes.

Operation was done on the left eye October 27, 1936, using a two-stitch flap. The stitches were removed November 10, at which time the anterior chamber was clear and of normal depth, the iridectomy was large, and there was no bulging of the operative wound. Vision, with a plus 10 sphere, was 20/40.

Operation was done on the right eye May 22, 1937, using the same technique. On June 2, the stitches were removed and the anterior segment of the eye was normal in appearance; the tension was normal to palpation. Vision, with a plus 10 sphere, was 20/50.

The patient was last seen April 28, 1939, at which time the tension was normal in both eyes, the pupils were clear, the vision good in both eyes, and there was no diplopia.

CASE 3.—The patient was a Mexican woman, aged 69, with a diagnosis of senile cataracts in both eyes, the cataract in the left eye being mature.

Cataract operation was done on the left eye June 24, 1938, with the usual technique. On July 4, 1938, the stitches were removed, at which time the anterior segment appeared normal. Vision, with a plus 10 sphere, was 20/70. Zinc sulphate was prescribed for conjunctival irritation.

An intracapsular cataract operation was done on the right eye July 15, 1939. On July 29, the stitches were removed. The tension at this time was somewhat elevated and two drops of 0.25 per cent eserine, four times a day, in the right eye was prescribed. On August 10, the tension in both eyes was normal, and the eserine drops were stopped. A mixture of zinc sulphate and adrenalin was continued in both eyes. The vision in the right eye, with a plus 10 sphere, was 20/60. April 17, 1940, the tension was normal in both eyes. The anterior chambers were normal and the patient was wearing a corrective lens in both eyes, giving a vision of 20/40 in the right eye and 20/70 in the left.

CASE 4.—The patient was a Mexican male, aged 60, with a diagnosis of senile cataract in both eyes, more advanced in the right eye. A combined cataract extraction was done in the right eye December 15,

1939. On December 18, the eye was dressed and the wound was flat; the anterior chamber was shallow and considerable lens cortex was present. Atropine ointment was instilled and 5 cc. of milk was given in the buttocks. On December 20, the eye was dressed again, and the anterior chamber was found to be deep with only a moderate amount of cortical material present. Circumcorneal and episcleral injections were evident. An ointment of eserine, 1.4 per cent, was instilled and 10 cc. of sterile milk was given in the buttocks.

From December 22, 1939, to January 12, 1940, the treatment consisted of the use of 1 per cent atropine ointment in the eye and the oral administration of salicylates and iodides four times a day. This therapy resulted in resolution of the secondary uveitis and the gradual absorption of the cortical material and clearing of the anterior chamber. The pupil was partly obstructed by overgrowth of the posterior lens capsule and fibrin deposits resulting from uveal exudate.

On January 15, the atropine ointment was discontinued and a zinc sulphate-adrenalin mixture was prescribed three times a day for the eye. The oral administration of salicylates was continued. The patient was kept under observation and this therapy was continued until March 29. Dark glasses were used. An examination April 23, showed the vision in the right eye, with a plus 10 sphere, to be good for objects; the patient could count fingers at ten feet. The eye was quiet. The posterior cataract will be needled later.

CASE 5.—The patient was a negro woman, aged 71, with a mature cataract in the right eye and an early cortical cataract in the left eye. She was first seen August 28, 1937, at which time extraction of the teeth was advised.

A combined extracapsular extraction was done on the right eye October 8, 1938. A slight amount of vitreous was lost following delivery of the lens.

On October 10, the eye was dressed. The anterior chamber showed good depth and the pupil was clear. There was slight prolapse of both iris pillars through the operative wound but the stitches were in place and holding the conjunctival flap over the two points of prolapse. No medication was put in the eye.

On October 12, the eye was dressed. The appearance was good and the patient counted fingers. No medication was used. The iris prolapses were shrinking.

On October 14 the eye was dressed, the stitches were still in good position. A solution of 1:1000 adrenalin was instilled and the eye bandaged.

On October 18, the eye was dressed; the stitches were found loose and were removed. The iris prolapses were entirely covered by conjuctival flap. A bandage was applied and the patient was instructed to change it every two days at home.

On October 25, the eye was dressed and the anterior segment appeared normal. There was no bulging of the wound edges and the prolapsed iris beads were flat. Dark glasses and zinc sulphate-adrenalin drops, four times a day, were prescribed.

On December 5, the wound was flat and healed. Only black spots marked the sites of iris prolapse. The lower border of the pupil was higher than normal. Vision with a plus 10 sphere was 20/70.

April 27, 1940, the right eye was examined. The appearance was normal, the tension good and the pupil clear. The corrected vision was 20/70. The left eye showed a mature cataract, on which operation was planned May 17, 1940.

CASE 6.—The patient was a woman, aged 60, with mature, arteriosclerotic, bilateral cataracts. The patient had hypertension, the blood pressure being 220/100.

The right eye was operated on by the usual technique December 26, 1939. On December 28, the eye was dressed and inspected and 1 per cent atropine instilled. On December 30, the eye was dressed and the wound was found to be in good position, the pupil clear and the anterior chamber of normal depth. The patient counted fingers at two feet. Atropine ointment was instilled. The postoperative course continued good. The stitches were removed January 16, 1940, at which time the wound was flat and healed, the tension normal and there was good object vision. A dark glass and zinc sulphate drops were prescribed. On January 23, the patient was continuing to do well. There was slight redness, although healing was complete clinically. With a plus 10 sphere before the eye, the vision was 20/100. February 17, the eye was inspected and the tension felt slightly elevated. A prescription for 3 per cent pilocarpin three times a day was given. On March 7, the tension was normal and the object vision good. The philocarpin was continued.

April 17, the patient stated that the vision was blurred. The tension was normal. Fundus examination showed subhyaloid hemorrhage at the macula. Iodides were prescribed and the pilocarpin continued.

May 8, the hemorrhage was found to be practically absorbed. Central vision was blurred for hand movements. Iodides and pilocarpin were continued and epsom salts was prescribed with instructions to report in two weeks for observation.

Comment.—We do not consider the retinal hemorrhage in this case connected with any operative trauma; it occurred four months postoperatively. We consider it a result of the patient's arterial disease.

SUMMARY

Of the six cases reported in detail, only three patients presented normal physical findings both in the eye and systemically. These three patients were each operated on bilaterally with good functional results.

Of the eight patients of the series whose eyes were entirely lost, five were due to chronic iridocyclitis, which finally developed into phthisis bulbi. We are sure that a careful study of these five cases would reveal a constitutional disease, either nutritional, glandular, alimentary, or even tuberculous, which would naturally lessen their chances of recovery from cataract operation followed by the most exacting postoperative care.

Obviously, we believe in the feasibility of this ambulatory method when a patient's circumstances make it necessary. The fact that we have practiced it for over two years with the results quoted in this paper, has prompted us to call it to the attention of our fellow practitioners.

1034 Nix Professional Building.

ABSTRACT OF DISCUSSION

Dr. Edward H. Cary, Dallas: I shall not criticize the technique or the method of operating the essayists have used in cataract extraction. I commend their description of the study of cases before operating. I have operated on many individuals with only one eye and saved the eye on account of having made a complete examination and eliminated some source of infection.

The period of time the patient should be kept in bed after operating for a cataract depends upon

many things. I have observed the harmlessness of the activity of the patient when the combined operation has been done, that is, an iridectomy with the cataract extraction. Although I know the importance of the stitch being made through the cornea, if there is a great deal of intra-ocular pressure to withstand, I believe the ordinary stitch through the conjunctiva is all that is necessary in persons who have had the combined operation. Then, too, there is something about the hardiness of the patient. Some people have marvelous resistance, excellent healing qualities and can have any amount of liberty. A good ophthalmologist will be able to judge for himself what he can do with the patient, for after all the practice of medicine is upon individuals who have to be treated as such.

Dr. Burleson (closing): Most of us practice medicine as individuals; we reach our conclusions as the result of personal experience. In the discussion of the subject matter presented in this paper, it might be well for me to review the cause and prevention of complications as I see them.

(1) No one should attempt the operation of cataract extraction except under skillful supervision, unless he is a trained operator.

(2) I think we are safe in saying that half of our complications are the results of improper technique or accident at the time of operation and are not due to postoperative care.

(3) *Preparation of the Patient.*—Most of our cataract patients are well past the meridian of life. A thorough physical check-up is as important as a skillful operation. This is the first step in the prevention of complications.

In review of these ambulatory patients we are discussing, we find that in patients in good physical condition the percentage of recovery differs very little from the percentage of recovery in private practice.

The most important complications following cataract operation are: wound infection, iris prolapse, vitreous prolapse, and expulsive hemorrhage. It has been our experience that these complications are no more frequent in our ambulatory patients than in patients in private practice.

As I have stated before, we use retaining conjunctival sutures. Conjunctival sutures are not used for the purpose of holding anything, but to secure apposition of the wound and they also make for quicker healing.

There is a complication that is seen by all surgeons who have had much experience. I refer to "hyphema," which occurs from three to five days after operation. This appearance of blood in the anterior chamber apparently is of unknown origin. There are several theories. My personal opinion is that it is due to hemorrhage of the iris vessels. Atropine will usually stop it.

The after-treatment in these ambulatory patients is the same as we use in our private practice. It has long been my custom never to look at an operated eye under three days—preferably five days—unless the patient complains.

We are presenting this paper with the hope it will demonstrate the feasibility of cataract extraction upon an ambulatory patient.

Dr. Burleson (closing): Dr. M. W. McCurdy, my associate, was the operator in these sixty cases. As stated, they were clinic cases and the patients either had to be considered ambulatory cases or not be operated upon at all. I am sure that he has demonstrated that the procedure advocated is perfectly feasible in the hands of a skillful operator.

Dr. McCurdy (closing: I wish to thank Dr. Cary for his discussion, and to agree with his opinion that the hardiness of the patient and his native resistance are certainly important factors in the healing of an eye operated on. I think this applies particularly to the type of person we were dealing with in this account of ambulatory cataract cases. I also agree with Dr. Burleson that proper preparation before operation and a safe technique in doing the operation are very important in preventing subsequent complications.

THE EDUCATIONAL NEEDS OF THE HEALTH OFFICER*

J. W. BASS, M. D.
DALLAS, TEXAS

The opinion that all licensed physicians possess the necessary educational qualifications for health officers is fast disappearing. The medical profession and a large percentage of the laity are beginning to accept public health work as a specialty.

There is probably no more accurate barometer for registering public opinion than the ideas or opinions expressed by our political leaders. When we register contempt for the opinions of politicians, we are expressing contempt for average intelligence. As an indication of what the average man is thinking, the conference of Mayors of North America in 1937 went on record as endorsing the standards of professional education for health officers recommended by the Committee on Professional Education of the American Public Health Association.

It is fairly well recognized that the training most essential to the success of the health officer is not provided in either the premedical or regular four-year courses in medical colleges. Although better training in public health could be given at most of our medical schools, it appears that there is not sufficient room in the curriculum at present to provide the training necessary to the public health administrator. Only a small per cent of the graduates of medical schools have any intention of ever entering the public health field. It does not seem advisable to provide such training in medical schools even if it were possible. The entrance requirements of medical schools have been established to provide the physician with the necessary educational background in the basic arts and sciences to enable him to become a scientific practitioner of medicine. No provision is made in the entrance requirements for the small per cent of graduates who may later enter the public health field. Since only a small per cent of the graduates of medicine will enter the public health field, it does not seem advisable to consider the revision of the entrance requirements of medical schools to meet the educational needs of the health officer. The tendency in medical education at present, and I believe it to be a good one, is to avoid specialization during the regular four-year

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course to enable the student to obtain a good general medical background.

In the interest of economy, it is far better to equip the medical health officers by special training in the necessary courses rather than require all physicians to take the courses necessary to the health officer. A large number of the courses so essential to the success of the public health administrator would find only limited application in the general practice of medicine.

The first responsibility of the practitioner of medicine is to his patients. He must apply his scientific knowledge to their benefit as individuals. On the other hand the health officer's first responsibility is a collective one.

A knowledge of mathematics is essential to the scientific collection study or interpretation of large numbers of observations. Mathematics is therefore an essential part of the training of the scientific health officer, and if he does not obtain the necessary background before he enters medical school, he must receive it before he becomes a scientific public health administrator. Even if he enters medical school with what is considered a good foundation in mathematics, it will be necessary that he have special training in their application to medical and public health problems.

The health officer must have special training in epidemiology. His needs in this field far exceed the need of such training in the general practice of medicine. If possible his internship should be served in a hospital with a communicable disease service, or he must have the benefit of experience that enables him to see large numbers of cases of communicable diseases. He must be able to recognize the unusual cases of communicable disease for it is in these cases he is most often called upon to pass judgment.

He must have special training in milk, water and sewage analysis. He must be familiar with the different methods of water purification, of milk pasteurization and of sewage disposal. He must know how to interpret a laboratory report of the bacteriological or chemical examination of milk, water or sewage. The average practitioner of medicine has very little need for such training. Consequently, very few of them go to the trouble to learn anything about it. The average practitioner of medicine knows just about as much about the interpretation of milk, water or sewage reports as the health officer understands about the interpretation of an electrocardiogram. There is no reason why it should be different. This is no reflection upon the ability of either; it is a direct result of the difference in educational needs.

An educational background in sociology and economics is most important to the health officer. He must be familiar with the relationship of sociologic and economic conditions, such as aggregation and income to health and disease.

Since a large part of health work is educational the health officer should have some elementary training, at least in education. He must be familiar with public health law because his duties often call for the use of police power of the State. This must be exercised with discretion and judgment in order that the public be provided with maximum protection and minimum inconvenience. He must be practical as well as scientific. Many scientific principles that are most desirable and most applicable to individual cases are not susceptible to universal application. One of the best illustrations of practices of this kind is the medical examination of food handlers. The health officer achieves nothing by trying to enforce standards of asepsis in milk control or food distribution that would completely deprive the public of milk or food.

It is necessary that the public health knowledge of the health officer not be too general but as specific as possible. He must know what is to be expected in the crude death rate, the infant mortality rate, the death rate from tuberculosis or other communicable diseases when the per capita income is so much or the age and racial distribution of the population or index of aggregation is given. General knowledge is not sufficient. The health officer with only general information of this kind is comparable to the syphilologist who knows that arsenic and bismuth are good for syphilis but who does not know the kind of arsenic or bismuth to use, or the dosage of the therapeutic agents indicated.

The scientific determination of the health needs of the community requires the application of a combined knowledge of medicines, mathematics, sociology and economics. In the determination of a desirable health program and its translation to an operating budget, it is necessary that the health officer have a thorough knowledge of the benefits to be expected from the various health activities. If this sense of comparison or relativity is lacking the health program will soon be dominated altogether by hobbyists, reformers, selfish interests or politicians seeking votes. The amount of money spent for effective health work will decline at the expense of non-effective hobbies or fads or valuable public health activities will be discontinued for those of more economic than public health importance.

The health officer must use his mathematical training to calculate rates and to

determine the relative importance of the various activities, if he is to obtain maximum public health benefits from the funds available. A knowledge of mathematical statistics not only enables him to predict future events from past experiences, such as epidemics and increases in death rates, but saves him from many pitfalls. It enables him to determine with a definite degree of precision whether the absence or presence of certain diseases or conditions is a result of the operation of chance or due to the effect of his or someone else's program. It will keep him from "pointing with pride" when the death or disease rates are low and relieve him of the serious difficulty of explaining when the rates are high. The lack of the necessary statistical training in the past has produced many "Chamber of Commerce Health Officers," who boast of low death rates that are more likely to result from a peculiar age distribution of the population than from his health program.

However, a man may be thoroughly trained in medicine, mathematics, sociology, economics and public health law; he may be well endowed with a specific knowledge of public health problems, and yet be a complete failure as a health officer.

Tenure of office upon the part of the health officer is essential to the consummation of a public health program or to progress in the public health field. Without some knowledge of politics or government, success and tenure are impossible. This training is essential to success regardless of the type of governmental jurisdiction. It makes little difference whether the government be state, city or county, or whether the city has a city manager, commission or aldermanic form of government. The sad part about this requirement is that it cannot be provided in schools of medicine or public health.

Public health teachers have been sadly disappointed when some of their best trained men have been unable to hold public health positions any length of time and some of them, after having been discharged several times, find themselves unable to obtain employment. It is generally recognized by public health leaders at present that no course in school can be provided that will insure the success of the graduate. The practical training in political science and government can be obtained only through experience. This experience should be obtained in a subordinate position of a good health department. Before any health officer should accept the position of city health officer for a large city, he should have had at least two to four years' experience as a successful assistant health officer in a city of comparable size. Experience as a full time health officer in a city only a little smaller may be satisfactory. For example, a health officer who has served successfully for two to four years in a city of 150,000 to 175,000 may safely accept the position as health officer in a city of from 250,000 to 350,000 population. One of the chief reasons why so many health officers become involved in politics is that they have not had sufficient practical training and experience in government to know how to avoid political entanglement.

A considerable amount of criticism has been directed against politicians because of the short tenure of health officers. Much of this criticism could have more properly been directed to physicians and health officers themselves. When a graduate of a public health school without any practical training or experience in the actual administration of a large city health department is discharged, should the politicians be criticised for discoverying the health officer's limitation before the recipient of the job is able to do so himself? It is nothing unusual for the college trained health officer without administrative experience to accept the position of health officer of a city and try to make the city fit the public health pattern he learned in school, rather than develop a health program to suit the community by a scientific determination of the needs of the locality. There is really no excuse at present for the public health trainee or physician not realizing his limitations. After all, it is the duty of our elected officials, if no one else will do it, to protect our cities and public health in general from the bungling of inadequately trained and inexperienced health officers. One of the best indications of progress in medicine and public health is the present scarcity of general practitioners who have the ignorance, audacity or dishonesty to seek, through political connections, the responsibility for the administration of large health departments. We would have made more progress in public health if we had devoted more of our time to the training and supporting of qualified health officers and less time to criticising politicians because of the short tenure of office of some health officers. In Texas under most governmental jurisdictions, it is generally known that the most incompetent health officer is assured of at least two years, when the same degree of efficiency in general practice probably would not be tolerated for two weeks.

The different circumstances under which the private physician meets his patients and the health officer meets his patients necessitate a considerable difference in their educational needs. The success of a private practitioner depends upon his contact with sick people—his bedside manner. The con-

tacts of the health officer are public and as a rule with people who are well. The practicing physician must convince his patient that his doctor possesses a superior knowledge of his illness. The health officer must convince his contacts that he also knows something about his profession; he must convince the public that he has superior knowledge of public health administration.

A knowledge of non-medical subjects is therefore more essential to the health officer than to the practicing physician. The health officer depends for his success and tenure upon the people he has contacted and he must convince them he is not only intelligent but knows his business. It is necessary that he have a specific knowledge of public health topics. Familiarity with non-medical literature or current events may sometime serve his purpose better than a knowledge of Ewing's Neoplastic Diseases or a familiarity with the latest books on orthopedics or plastic surgery. In his actual work, the ability to use logarithms or a slide rule may serve him better than a knowledge of eyegrounds or the technique of the insertion of a bronchoscope. In the study of a suspected milk epidemic he can use Bernouilli's theorem or the theory of least squares with more advantage than the theory of what happens to sulfanilamide or sulfapyridine in the blood stream.

In his scientific studies and reports or while studying the communicability of certain diseases an understanding of mathematical curve fitting or of life table construction may be as important to him as the knowledge of the type of splint indicated may be to the orthopedist.

Some criticism has been directed at health officers for trying to invade the field of private practice. Most of this has been due to a difference of opinion as to what constitutes preventive medicine and what constitutes curative medicine. Opinions upon this subject may be expected to change from time to time. Much of the work now assigned to the urologist and orthopedist was at one time claimed by the general surgeon. The public will demand that the health officer assume responsibility when they believe practitioners are not accepting them as they should. It is the untrained health officer who does not know public health but who thinks he knows how to practice medicine who is most likely to invade the private practice of medicine. Some health measures require universal application or collective effort if maximum efficiency is to be obtained; these belong to the health departments. Other measures just as important are not susceptible to universal application at all; these must be handled by private practitioners of medicine. The number of health officers who want to enter the general practice of medicine and surgery must be few indeed. Nor does the average health officer want to have his field invaded by untrained general practitioners of medicine. It is most discouraging to the trained health officers who have attempted for years to make their field a specialty to see important administrative health positions invaded through political conniving by untrained and none too successful general practitioners of medicine. The health officer who attempts to do general practice is not qualified to practice medicine or be a health officer.

This discussion of the difference in educational needs of the health officer and general practitioner of medicine could be continued almost indefinitely. It is hoped that in this discussion, that if I have not established public health as a specialty, at least the needs of such a specialty have been presented.

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City Health Department.

ABSTRACT OF DISCUSSION

Dr. Van C. Tipton, San Antonio: Dr. Bass has given a most practical paper on this timely subject. The splendid work he is doing amply proves his knowledge of the subject.

The study of psychology should be stressed. We deal with people, normal and abnormal, individually and collectively. Successful dealing with them depends largely upon a knowledge of psychology. Mere knowledge of mathematics, sociology, and medicine will be of little value without such psychological training.

Most important educational needs besides those of a professional nature, are statesmanship and administrative ability. Statesmanship is the ability to deal harmoniously with our fellowmen. It is an absolute requirement for success in our relationship with the superiors in local government and with civic and professional groups. Schools teach political science, but the only way to obtain a practical knowledge of politics of today is to serve under a successful local health officer as suggested by Dr. Bass. Such knowledge will enable the health officer to avoid political entanglements.

Administrative ability requires a knowledge of modern bookkeeping, methods of cost accounting, of revenues, taxes, and the value of and responsibility for public funds; such knowledge wins the respect and confidence of local governing bodies.

One more desirable requirement is that a physician do general practice for a few years before specializing in public health. Only in such manner can he acquire and retain the viewpoint of the practitioners of the other branches of medicine. Certainly the value of this cannot be questioned.

Dr. F. C. Elliott, Houston: The need for graduate education for those who serve as health officers, as stressed by Dr. Bass, is well-founded. Service

as a health officer in a community calls for specialized training; however, I do not believe that we should overlook the need for education in public health administration and public health needs for the undergraduate student.

Dr. Bass has mentioned that it is necessary to have coöperation, and that to obtain this coöperation, the health officer must be educated in the ways and means of obtaining it. One of the first steps in obtaining coöperation is the coördination of the private practice of the physician and dentist with the public health practices of the health officer. In order that there will be a common ground for discussion, it is necessary that the practicing physician and dentist understand more about the practice of public health. For this reason, we include on our faculty at the Texas Dental College, the city health officer, who has had education in public health. We include, also, a dental public health officer, who has had special training in the principles and methods of public health dentistry.

It is our belief that, if the community is to receive a whole health service, the student upon graduation should recognize the need for consultation with the public health officer, just as he needs consultation with a fellow practitioner.

Dr. J. Herbert Page, Houston: I commend Dr. Bass on his excellent paper, and I think he brought out one point that should be stressed, that health officers as well as having educational and other qualifications should be trained in personality and tact.

Dr. R. B. Wolford, El Paso: I want to stress two points in this discussion. First, I am convinced that any physician handicaps himself if he enters any specialty until he has been in private practice for at least five years, because without general experience he does not know the problems of the general practitioner and tends to see every problem from one viewpoint. This applies especially to health officers, for they must know other doctors' problems to be able to work with them, and it is impossible to put over a health program without the cooperation of the medical profession.

Second, a health officer should have experience under the direction of an experienced health official before taking over an important administrative position.

SKIN ERUPTION DUE TO RUBBER SPONGE POWDER PUFF

A rubber sponge powder puff was finally found to be the cause of an intense dermatitis (skin inflammation) after tests of all the rest of the patient's cosmetic preparations had given negative results, Lester Hollander, M. D., Pittsburgh, reports in *The Journal of the American Medical Association* for December 28. This is the first such case to be reported in medical literature, he says.

The patient had an eruption involving the nose, the upper lip and the adjacent portion of the right lower eyelid. The eruption was of about four months' duration and was exceedingly itchy.

The patient was instructed to stop the use of her cosmetics, soap, handkerchiefs and cleansing tissues for two weeks. At the end of that time her face was practically clear, but patch tests for these substances were negative. Later, in obtaining samples for additional patch tests, Dr. Hollander learned that she had bought a rubber sponge powder puff shortly before the original onset of the eruption, and that she used the puff only when away from her home. The outline of the eruption was confined to the area of its use.

THE SIGNIFICANCE OF A DENTAL PUBLIC HEALTH PROGRAM FOR THE PRESCHOOL-AGE CHILD*

F. C. ELLIOTT, Ph. G., D. D. S.
(Dean, Texas Dental College)
HOUSTON, TEXAS

Introduction.—Public health administrators recognize that the non-integrated programs of the past have not been entirely satisfactory. These administrators realize that it is not possible to separate the individual from his environment or to individualize his basic needs. Satisfactory progress with a public health program can be made only when all factors conducive to the best interests of the individual have been observed.

Public health measures are welfare measures, and should be oriented to the welfare program as a whole. There is no way to estimate the number of individuals who receive relief, but who might be self-supporting if it were not for some physical handicap that could have been prevented, or that could be relieved by proper medical aid. Neither is there any way to estimate the number of physical incapacities of other individuals who receive relief that could have been prevented by the timely correction of bad environmental conditions.

Health is dependent upon the observance of all of the laws of hygiene, not just some of them. Health is dependent also upon a consideration of all of the parts of the body, and not just some of them. The rapidity with which the newer phases of public health, such as industrial hygiene, mental hygiene, oral hygiene and others, are being included in state health programs points to the general acceptance by public health administrators of the need for a *whole* public health program.

ORAL HYGIENE

Oral or dental hygiene belongs in a public health program for several reasons, chief among which is the almost universal prevalence of the disease, dental caries. While it may be found that measures of prevention, other than oral methods, may be used ultimately to control dental caries, this information may become available only because of a mass consideration of the disease. Too, the high incidence of soft tissue infections of the oral cavity calls for a proper consideration of the infectious diseases of the oral cavity. While the common drinking cup was not banned by public health laws because of infectious oral diseases, it has turned out to be a very good dental public health measure. Kramer,[4] in a study of the incidence of Vin-

*Read before the Section on Public Health, State Medical Association of Texas, Dallas, May 15, 1940.

cent's infection among children, found that the percentage of prevalence was approximately 9 per cent.

Oral hygiene also is related to the mental hygiene program. Frustrations, inhibitions, and other psychological conditions are quite common to children who have facial deformities that are due to crooked teeth. M. J. Futterman[3] in reporting the relationship of physical disturbances to inefficient mastication made a study of the psychogenic factor that is involved. Children who were receiving orthodontic treatments were asked to give in their own words a written report of their reactions, before and during the treatments, to the conditions of their mouths. Futterman apologizes for the "testimonial" style of the children's reports, yet the mental hygienist recognizes the importance of this style of report. I should like to quote one of the "testimonials" from Futterman's article.

One child wrote:

"Ever since I was 9 years old, I was very tooth conscious. Because my teeth were crooked, I used to think everyone was looking at me and saying: 'Tut, tut, what a nice little girl, but just look at those teeth. What a shame!' My mother made me feel rather queer, too. Every now and then she would ask me to open my mouth and she would scrutinize my teeth and then she would look in the mirror and examine her own. Sometimes I would hear her talking to my father when I was in bed, and the two words that predominated their conversation were: 'Florrie's teeth.'

"When I was 14, my mother broke the news to me. 'Flo,' she said, 'you may have your teeth straightened if you want to.' I was both glad and afraid, but when I saw someone staring at me the next day, I had decided.

"I find that the whole thing was much pleasanter than I expected. My satisfaction now, more than makes up for any slight discomfort that I may have felt. Now when I see someone staring at me, I'll just straighten my hat and think: 'Well, it can't be my teeth!'" (F. H., age 16 years).

Likewise, mental upsets occur in children because of mutilation of front teeth by decay, or unsightliness that is due to mottled enamel. The public water supply is a concern of the public health dentist, since the presence of fluorides above a certain level in the water causes mottled enamel.

Habits of speech also are a concern of the public health dentist, since many of the causes of speech defects are due to crowded teeth and narrowness of the dental arch, which interferes with the proper tooth contacts of the tongue.

Mass social problems, therefore, are problems of the public health department. Since oral hygiene is related directly to several divisions of the health department, it should be maintained as an independent division.

To the State, County, or City health director it would seem quite simple to inaugurate a dental public health program if he were unaware of the magnitude of the problem. To desire a complete public health program for the *whole* community is one thing—to accomplish it is another. When one contemplates the amount of time that would be necessary to fulfill a complete dental public health program, disregarding the cost, one realizes very soon the impossibility of its accomplishment. In this connection, the statement of Guy Stanton Ford[2] serves to delineate the immensity of the task. He said,

"If all the dentists in the United States were marshalled on the Atlantic Coast and started on reparative work and worked westward, it would be 125 to 150 years before they would reach the Pacific Ocean. By that time there would be behind them generations who were suffering from the same things which they had just repaired."

If a complete dental public health program, which would include the treatment of dental diseases, cannot be accomplished at the present time, what would constitute a rational dental public health program? It is quite logical for the alert public health administrator to search for measures of prevention rather than to conclude that a treatment program is the answer. The question arises as to what are these measures of prevention. The usual preventive public health measures will not suffice, since the major diseases cannot be controlled by immunization such as is the case with diphtheria.

There is no way to remove the cause of dental caries by environmental sanitation measures which are so successful in controlling typhoid fever. Neither is dental caries a communicable disease. There is left but one division of the public health department that can be effective in the prevention of oral disease. This is the division of health education. Yet to be effective in a dental public health program, health education becomes more than a publicity program. It should include not only the usual methods that are employed to stimulate interest in health, but it should include also teaching clinics where proper mouth care can be taught and where treatments may be given. This is another reason for the establishment of the oral or dental hygiene division of the public health department as a separate division.

THE DENTAL PUBLIC HEALTH PROGRAM

To be effective, the program of the Oral Hygiene Division should be kept within an area where the services may be complete. The usual procedure in a "prevention by education" program is to include all age levels. While programs of this type may be beneficial, the results that are accomplished are immeasurable. Many years of contact with clinics where treatment has been provided for the less fortunate child have convinced the essayist that the dental public health pro-

gram should be complete for the preschool-age child. In this area, the prenatal, as well as the well-baby program of the Division of Maternal and Child Hygiene, should be included.

For the well organized oral health program, the public health administrator will select as the director a dentist who has included in his training the principles and practices of public health. Under the supervision of the director should be included dentists, dental hygienists, public health nurses, nutritionists, and class room teachers as active participants in the program. The medical profession, the dental profession, the private duty nurse, and other health groups also must lend hearty coöperation.

THE EDUCATIONAL PROGRAM

It is interesting to learn that in many communities where facilities are provided for the treatment of early cases of dental caries for indigent children a huge number of parents do not avail themselves of this service. Surveys have been made to determine the reason for their indifference. It has been found that a lack of appreciation for the benefits of early dental care has been largely responsible. This is a handicap that must be overcome not only by an educational program for the parents of preschool-age children, but also for the physician and the dentist who persist in telling parents that "baby teeth need no treatment since they are only temporary."

The preschool-age educational program should be directed toward the relationship of the general hygienic measures that are important for the development of sound tooth structures. Expectant mothers should know the periods at which the teeth are formed and the influences that may affect the formation of the teeth. These mothers should be taught the need for proper mouth health for themselves. Oral infection should be discovered in the mouths of these mothers. Also, the expectant mother, although she is an adult, because of her unborn child, should receive dental treatment in the dental public health clinic.

The preschool-age educational program should begin very early, so that the mother will begin bringing her child to the dental clinic not later than his second year, and continue this practice on the advice of the dentist until the child is ready to enter school.

It is essential that all members of the public health staff, who come in contact with the mother or the child during the preschool-age period of the child, should understand fully the dental public health program. Especially is this true of the physicians in the prenatal and well-baby clinics. Progressive health departments recognize the importance of this phase of the educational program; therefore, they provide annual institutes whereby the dental division can cover fully the scope and extent of the dental public health program as an intramural project. Usually, the dental institute is a part of the general institute program of the health department.

Considerable thought must be given to the clinic projects if they are to serve their purpose as a preventive dental program. Some confusion exists in the minds of many individuals as to the extent of hospital dental services. The dental department of a hospital should be concerned only with sick patients. These services should not be extended beyond diagnosis, surgical and medical treatment. Reparative procedures should not be considered a part of a hospital routine. The dental clinics of the public health department, even though they render treatment services, should be looked upon as preventive clinics, the function of which should be primarily that of education. While the clinics will render treatment only to those who cannot afford to visit the private practitioner, at the same time the educational value of the clinics should be made available to all of the children whenever it is possible.

The majority of dental public health programs have started with the school-age program. This has happened for two reasons: (1) because of the ease with which the entire group of children could be examined, and (2) because of the difficulty to obtain dentists who desire to render services to preschool-age children.

These school-age children have been examined in the class room by volunteer dentists, dental hygienists, or public health dentists. Unexpected educational values have resulted from this type of program. All of the children in the school room have made pleasant contacts with the dentist or the dental hygienist without the accompanying fear that is associated usually with the dental office. They have received sound educational advice. They have associated the examination of the mouth with the other educational projects in the class room. The interest of the class room teacher has been aroused and she has become cognizant of the values of oral health. Though it is the purpose of this presentation to point out the need for an earlier approach to the prevention of dental disease, the school-age program has served as a valuable medium to discover methods that would be useful for educational purposes. The examination routine in the public schools for the school-age child should not be considered as a clinic program. Examinations of this type should serve as educational me-

diums only and should be followed by a more thorough clinical examination. Mass examinations in the summer round-up programs of Parent-Teacher Associations have demonstrated the dangers that exist in the superficial examination which is given in other specialties of health service.

Since it has been discovered in the school-age program that the majority of dentists are not trained to care for the preschool-age child, it is essential that a training program be provided for them. Too, the class room teacher should be educated in matters pertaining to health so that she will recognize that a *whole* child comes to school. Not only will she be acquainted with methods and materials of the usual class room teaching, but she should have enthusiasm also for the education of the child in ways of living.

The Texas State Department of Health has recognized the need for health education for the class room teacher. They are providing this type of education in many of the training schools for teachers throughout the State. They are providing also educational programs for the dentist.

THE CLINICAL PROGRAM

It is essential that the clinical program for the preschool-age child be complete. Once the tooth tissues have been damaged by caries, there is no opportunity for them to heal. The destroyed tissue must be replaced by an artificial substitute. For this reason, dental lesions must be discovered early. The usual suggested age of two years, while too early for dental treatment, serves to acquaint the mother and the child with the dental clinic and also permits the child to become accustomed to the dental office. By observation of the child between the ages of 2 and 6, many cases of malocclusion may be prevented, or simple remedial measures may be applied that will correct minor malocclusions and prevent major malocclusions later.

The dental treatments that are provided for the child should include oral prophylaxis, the filling of teeth, extractions, correction of minor malocclusions, as well as consultation advice from other divisions of the health department where it is needed, such as nutritional advice and advice from the pediatrician. Consultation services should be provided by a staff of consultants of private dentists who will elect to care for the more difficult cases that may be presented. It is important to include an oral and plastic surgeon in the consulting staff so that cases of hairlip and cleft palate may come under early observation. The dental clinic should provide services also for the expectant mother.

LOCATION OF TREATMENT CLINICS

There are several different ways for providing the dental services for the preschool-age child. In the larger cities they may be provided through the decentralized health centers of the health department that are located in strategic locations throughout the city, or in the smaller cities they may be provided by one central dental clinic. The most logical program is one in which the child, whether an indigent child or a low-income group child, should have the services provided for them in the office of a private dentist. A program of this type increases the understanding of the dentist in his civic responsibilities. Also, it provides the child with an independent sense of security. The Kellogg Foundation in coöperation with the University of Michigan, School of Dentistry, has found that this type of program is more satisfactory than the usual field program. By forming an association with the dental profession, the health department is capable of rendering a much broader service.

CONCLUSION

What is the significance of the preschool-age child dental public health program? As in all public health measures, it is evident that the earlier the start is made to prevent dental disease, the better is the result. It becomes more important in a dental public health program, because of the inability of the tooth tissues to form a scar. Since it has been found by numerous surveys that over 95 per cent of the children are affected by dental disease, it becomes quite important to stem the tide of dental caries by inaugurating methods of prevention very early.

In the clinical program of The Texas Dental College, with a group of children, it was found that it was possible to decrease by 70 per cent the amount of dental services for the school-age program after the proper preschool-age program had been carried out. H. G. Chope,[1] Health Officer of Newton, Massachusetts, reports that in a survey of their 1937 program 73.9 per cent of the children between the ages of 2 and 10 years needed dental care, while for the year of 1939 the amount of dental care that was needed had decreased to 43 per cent. There has been sufficient evidence accumulated to demonstrate the value of the preschool-age dental public health program. Therefore, it is evident that those who are interested in the health of the *whole* child should look with concern upon his dental needs. Their concern should stimulate them to support aggressively a whole health program for the preschool-age child which must include a complete dental service program.

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ABSTRACT OF DISCUSSION

Dr. Edward Taylor (D. D. S., Director of Dental Health, Texas State Department of Health) Austin: On behalf of the dental profession, I want to express our appreciation for this representation on the program of the Public Health Section. Dentistry is new in this field but we believe that it is now established as a permanent fixture. Dentistry looks to the medical profession for guidance and leadership. The entire medical world is accepting dental health as indispensable in the general program. We have endeavored to tie it in intimately with the general health program and to look not at the mouth alone but at the whole organism. But in many instances, through lack of active coöperation, on the part of physicians, these efforts have been seriously handicapped. Let us implore you as leaders to help us as much as possible to coördinate the dental phase.

We appreciate Dr. Elliott's paper and we appreciate him as a benefactor in the program of public health.

The dental program is almost entirely one of education and prevention. It is carried on, for the most part, through volunteer services of local dentists. The dentists of Texas have been very coöperative. In a few counties with health units we are carrying on dental programs composed of part educational and part clinical service for indigent school children. These are proving to be very pleasing. One of our recent projects is the installation of a mobile dental unit which is itinerant for rural and small town schools, doing educational and clinical work. It likewise is proving to be very pleasing.

In conclusion, may I again implore you as physicians to help us make possible a fuller realization of dental health as an integral part of the general program of public health.

Dr. J. Herbert Page, Houston: I wish to commend Dr. Elliott on his excellent paper. Dr. Elliott brought out how it was possible to take care of the preschool child by establishing dental clinics in various parts of the city. As County Health Officer and having to do with rural sections, I should like to ask what method should be used in taking care of the preschool child in the rural areas.

Dr. E. W. Prothro, Corpus Christi: In answer to the question, "How dental programs may reach rural communities," I feel that we have solved the problem rather well in Nueces County. We have a health unit with a full-time dentist, who inspects for dental defects all children in attendance during the school term and the preschool children who attend annual summer round-ups. A wide educational program is carried on throughout the year.

Cards when showing indigency and properly signed, entitle children brought to central stations to free dental service. Corrections include cleaning, extractions and amalgam fillings in both deciduous and permanent teeth. Teeth too bad for fillings are treated in such a manner as to retard decay. Indigent children are given brushes and are taught to make their own dental powder from salt and soda with some flavoring extract.

The State has a traveling dental unit which is giving a like service to more sparsely settled areas.

Dental practitioners are very enthusiastic about this program as they have found it very remunerative to them as a formerly dull business, children's dentistry, has become very lucrative. Dental defects in local school children have been reduced from more than 90 per cent to around 40 per cent.

I wish we could formulate some similar plan to correct other defects in children of indigent families. Many doctors have not taken advantage of the school inspection programs to get business to the same degree as have dentists. Instead of agreeing with school inspectors and thus getting patients when corrections may easily be made they seem to resent someone else having found the trouble and make light of conditions and refuse to accept them as patients.

INTERPRETATION OF THE VISUALIZED GALLBLADDER*

GEORGE TURNER, M. D.
EL PASO, TEXAS

Before the advent of opaque dye in 1924, perfected by Graham, *et al.*, for rendering the gallbladder visible, information conerning the condition of the gallbladder had to be gained from whether or not it contained opaque stones, possessed a wall of sufficient density to cast a contrast shadow, and from deformities of the duodenum caused by adhesions from the diseased viscus to adjacent structures. These are yet cardinal points in the diagnosis of gallbladder disease and none the less important since the advent of the dye. A flat film of the gallbladder area before the dye is given and a careful barium study of the stomach and duodenum after the dye films are completed make an important part of the examination.

Experience has taught that the wall of the normal gallbladder is so thin and deeply buried that it will not produce a contrast shadow on a flat film. In case the wall has become sufficiently dense through fibrous change and consequent thickening to produce a shadow in contrast with the surrounding tissues, a diagnosis of chronic cholecystitis can safely be made. This information is again important in determining the emptying tim or degree of filling of the gallbladder with the dye. A light shadow of the same density as that obtained before administration of the dye means no filling or complete emptying if the first films made after taking dye showed it filled.

Calcium density stones are readily demonstrated and are not often confused with any other condition. The characteristic laminations, translucent shadows encircled by a rim of calcium, small, multiple, shot-like shadows, or the typical faceted arrangement serve to differentiate gallstones from a stone in the right kidney pelvis, gland calcification or ir-

*Read before the Section on Radiology and Physiotherapy, State Medical Association of Texas, Dallas, May 14, 1940.

regularly calcified rib cartilage. Dye administration is important after stones have been demonstrated to determine if there be function of the gallbladder, its size and contour, and to further identify the stone shadows within the gallbladder. It is necessary occasionally to use the dye and also to make pyelograms of the right kidney where there is a single gallstone and also a right kidney stone. A lateral view is helpful in making this differentiation.

A barium study of the stomach and duodenum will give information concerning the condition of the gallbladder in most cases of gallbladder disease. In acute and subacute cholecystitis, motility of the stomach and duodenum is increased with no point of irritation of either of these structures. Approximately 50 per cent of the cases of chronic cholecystitis will show deformity of the cap or second section of the duodenal loop from adhesions. These adhesions are characterized by fixation and deformity of the loop without ulcer defect or irritability. Occasionally adhesions will be sufficiently dense and contracted to produce obstructive narrowing, in which case hypergastric motility, irritability, and spasm of the duodenum, together with clinical symptoms of pyloric obstruction, will be found.

After more than fifteen years experience with opaque gallbladder dye it has been shown that oral administration is the best method of giving it. Reactions following oral administration are less frequent and less severe than when given intravenously and there are not so many contraindications. Most radiologists have discontinued the use of the dye intravenously. Jaundice, acute cholecystitis with or without stones, and advanced cirrhosis of the liver are contraindications for its use. Interpretation of the results from oral administration are coming to be well understood. Granting that the proper dose of dye has been given and that the films are made properly, failure of the gallbladder to fill is a definite criterion of a pathologic condition. To be quite sure that instructions for taking the dye have been properly followed it is best to repeat the dye before reaching a final conclusion of a blocked duct in non-filling instances.

There is no place in radiology where detail of technic is more important than in the study of the gallbladder. Any break in the chain of detail necessary to produce films to bring out properly contrasted soft tissue shadows in the abdomen is likely to lead to an erroneous conclusion. The usual routine films consist in a flat view of the gallbladder area before giving the dye. The dye is given orally following a fat-free or nearly fat-free evening meal. The first film is made the following morning approximately fourteen hours after taking the dye and immediately after a cleansing enema. It is best to give the enema immediately before making the film to avoid refilling of the transverse colon with gas or unabsorbed dye sufficiently to obscure the gallbladder shadow. Again an enema shortly before making the film will produce enough stimulation to the gallbladder to make it fill, whereas no filling would be found on a film made before the enema; or it would be found empty again if too much time elapsed after the enema and before the film. One or more films are made at this time and others six hours following the stimulation of a fatty meal. If sufficient dye has been given and absorbed the gallbladder will be found to show some degree of filling on the morning films unless it is blocked by cystic, hepatic, or common duct obstruction.

In cases of marked ptosis or enlarged liver the gallbladder is likely to be directly in front of the spine, or more rarely below the pelvic brim, and its outline obscured on a film made according to the usual technic. In these cases it is necessary to elevate the right hip and thus rotate the patient to the left to throw the shadow from in front of bone. A lateral view is occasionally necessary and useful.

The afternoon films usually show the normal gallbladder empty of dye. The length of time required for complete dye elimination is in proportion to the amount of dye taken. The normal gallbladder is more likely to be empty six hours after fat stimulation following one dose of dye than it is after two or more fractional doses. Elimination is slower following a large than a small dose. The fact that it is not completely empty six hours after fat stimulation does not mean that it is diseased. A reduced size with a regular outline only means that the process of emptying is not complete. If it remains of approximately the same size and configuration as before the fat stimulation, evidence of abnormal retention is indicated.

Opaque stones may be obscured by the dye, though their outline can usually be followed by a contrast greater than that of the dye. The outline of negative stones is contrasted by a density of the dye greater than that of the stones. Sand is difficult to demonstrate though it will often appear as a small shell-like margin taking the shape of the fundus. Small, foamy, negative stones are best seen on films made in the standing position. They form a zone of negative shadows at the middle third of the gallbladder.

Evidence of cholecystitis is shown by variations in shape, size, and function. Generalized contraction with poor function is one of the most common findings. Irregular contraction with resulting deformity is common. The middle third and tip of the fundus are the most usual locations for fibroid contraction. Deformities produced are curving, flattening of the medial edge, cuff-like constriction with bulb formation at the fundus, and folding. Pointed or "tented" defects indicate adhesions and may be either to the duodenum or, more rarely, to the colon.

Anomalies of the gallbladder are very rarely seen. Duplication is the most common. Diverticulae are also rare. Localized contraction and erosion about a stone sometimes form an auxiliary pouch.

Adhesions about the gallbladder are not always caused by inflammation arising within it. It may occasionally find itself "in bad company" and does not stand alone as a trouble maker with adjacent structures. Adhesions following acute duodenitis or a penetrating duodenal ulcer are found with no other involvement of the gallbladder.

Tumors arising from the mucosa show characteristic, constant defects. Papilloma is the most frequent. These defects appear at either margin and remain constant through any degree of filling or phase of emptying. They are usually small.

109 N. Oregon St.

MISCELLANEOUS

COMING MEETINGS AND CLINICS

State Medical Association of Texas, Fort Worth, May 12-15, 1941. Dr. Preston Hunt, Texarkana, President; Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth, Secretary.

American Medical Association, Cleveland, June 2-6, 1941. Dr. Nathan B. Van Etten, New York, President; Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Southern Medical Association, St. Louis, Missouri, November 11-14, 1941. Dr. Arthur T. McCormack, Louisville, Kentucky, President, C. P. Loranz, Empire Building, Birmingham, Alabama, Secretary-Manager.

Texas Allergy Association, Fort Worth, May 12, 1941. Dr. Boen Swinny, Medical Arts Building, San Antonio, President; Dr. Homer Prince, Medical Arts Building, Houston, Secretary.

Texas Ophthalmological and Otolaryngological Society, San Antonio, 1941. Dr. E. L. Goar, Houston, President; Dr. Dan Brannin, Medical Arts Building, Dallas, Secretary.

Texas Radiological Society. Dr. C. F. Crain, Corpus Christi, President; Dr. L. W. Baird, Temple, Secretary.

Texas Club of Internists, Houston, February 14 and 15, 1941. Dr. Carl Lovelace, Waco, President; Dr. George Herrmann, Medical College, Galveston, Secretary.

Texas Association of Obstetricians and Gynecologists, Galveston, 1941. Dr. Roy Grogan, Fort Worth, President; Dr. Julius McIver, 1314 Medical Arts Building, Dallas, Secretary.

Texas Pediatric Society, Fort Worth, May 14, 1941. Dr. C. P. Jasperson, Corpus Christi, President; Dr. Frank Lancaster, 4409 Fannin Street, Houston, Secretary.

Texas Neurological Society, Fort Worth, May 12, 1941. Dr. Wilmer Allison, Fort Worth, President; Dr. Melbourne J. Cooper, Nix Professional Building, San Antonio, Secretary.

Texas Railway and Traumatic Surgical Association, Fort Worth, May 12, 1941. Dr. J. D. Becton, Greenville, President; Dr. Ross Trigg, First National Bank Building, Fort Worth, Secretary.

Texas State Pathological Society. Dr. Geo. T. Caldwell, Dallas, President; Dr. M. D. Bell, 1109 Medical Arts Building, Dallas, Secretary.

Texas State Heart Association, Fort Worth, May 12, 1941. Dr. Joseph Kopecky, San Antonio, President; Dr. V. E. Schulze, San Angelo, Secretary.

Texas Dermatological Society, Fort Worth, May 12, 1941. Dr. W. A. Smith, Beaumont, President; Dr. Duncan O. Poth, 1230 Nix Professional Building, San Antonio, Secretary.

Texas Surgical Society, Temple, April 7 and 8, 1941. Dr. W. L. Crosthwait, Waco, President; Dr. Walter Stuck, 1426 Nix Professional Building, San Antonio, Secretary.

Texas Orthopedic Society, Fort Worth, May 12, 1941. Dr. W. B. Carrell, Dallas, President; Dr. Ruth Jackson, Medical Arts Building, Dallas, Secretary.

Texas Association of Medical Anesthetists, Fort Worth, May 12, 1941. Dr. Thomas H. Compere, Houston, President; Dr. R. A. Miller, 1415 Nix Professional Building, San Antonio, Secretary.

Texas Society of Gastro-enterologists and Proctologists, Fort Worth, May 12, 1941. Dr. M. O. Rouse, Dallas, President; Dr. Tom E. Smith, 1207 Medical Arts Building, Dallas, Secretary.

Texas Mental Hygiene Association, San Antonio, February 14, 1941. Dr. Paul White, Austin, President; Dr. Evelyn M. Carrington, Huntsville, Secretary.

Texas Tuberculosis Association, San Antonio, May 5-8, 1941. Dr. E. G. Faber, Tyler, President; J. W. Butler, Galveston, Secretary.

Texas Public Health Association, Corpus Christi, November 3, 4, and 5, 1941. Dr. George A. Gray, Sweetwater, President; Mr. Alan C. Love, Austin, Travis County Health Unit, Austin, Secretary.

Second District Medical Society. Dr. W. V. Ramsey, Abilene, President; Dr. W. T. Sadler, Merkel, Secretary.

Third, Panhandle, District Medical Society, Amarillo, April 8 and 9, 1941. Dr. F. A. White, Childress, President; Dr. H. H. Latson, 301 Polk St., Amarillo, Secretary.

Fourth District Medical Society, San Angelo, October, 1941. Dr. O. H. Chandler, Ballinger, President; Dr. F. T. McIntire, San Angelo, Secretary.

Fifth and Sixth, Southwest District Society, Laredo, 1941. Dr. T. E. Christian, San Antonio, President; Dr. W. W. Bondurant, Jr., 1512 Nix Professional Building, San Antonio, Secretary.

Seventh, Austin District, Austin, February 11, 1941. Dr. Joe A. Shepperd, Burnet, President; Dr. A. L. Nanny, Marble Falls, Secretary.

Eighth, Ninth and Tenth District Medical Society, Galveston, April 17 and 18, 1941. Dr. Walter D. Brown, Beaumont, President; Dr. A. A. Ledbetter, Medical Arts Building, Houston, Secretary.

Eleventh District Society, Tyler, 1941. Dr. Clayton Shirley, Tyler, President; Dr. C. C. McDonald, Tyler, Secretary.

Twelfth, Central Texas District Society, Cameron, July 8, 1941. Dr. Dan Warren, Waco, President; Dr. R. K. Harlan, Temple, Secretary.

Thirteenth, Northwestern District Society, Bowie, March 11, 1941. Dr. J. Edward Johnson, Mineral Wells, President; Dr. Charles H. McCollum, Jr., 210 Mid-Continent Building, Fort Worth, Secretary.

Fourteenth District Society, Sulphur Springs, June, 1941. Dr. Ira L. Thomas, Gainesville, President; Dr. R. S. Usry, 1835 Garrett, Dallas, Secretary.

Fifteenth, Northeast District Society, Longview, October 14, 1941. Dr. Hugh M. Ragland, Gilmer, President; Dr. J. N. White, Texarkana, Secretary.

CLINICS

Dallas Southern Clinical Society Conference, Dallas, March 17-20, 1941. Dr. Everett C. Fox, Medical Arts Bldg., Dallas, President; Dr. C. H. Warren, 1133 Medical Arts Bldg., Dallas, Secretary.

New Orleans Graduate Medical Assembly, New Orleans, March 3-6, 1941. Executive office, 1430 Tulane Avenue, New Orleans.

EDITOR'S NOTE.—A series of such articles as the following, because of their pungency, simplicity of style, obviously prepared for lay consumption, was recently released to the lay press of the State, and widely published. They are being reproduced in the JOURNAL as examples of what can be done to inform the public on important health problems. We are indebted to the San Antonio *Express* for invaluable aid in this particular campaign.

LEAVE 'EM WHERE THEY LIE

Conditions to Meet and What to Do in Shock—
Leave 'Em Where They Lie.

Shock: Do you know what it is and why?
It is a sudden lowering of the vital function of

the nervous system (brain and heart) and when severe, kills.

What causes shock?

It is caused by injury or emotion. Either may increase the other. If you only see the accident and faint—that's shock. In case of injury, excitement and hurry increase shock. A man badly bruised may have severe shock, while one with a broken thigh may not be so shocked, or vice versa.

What happens in shock?

The nerves that control the blood vessels are upset. Due to disturbance of nerve supply, the arteries are contracted and so the blood does not reach the surface of the body or the brain. When too little blood reaches the brain, as in severe shock, they die.

This condition does not depend upon which bone or how many bones are broken, but upon the effect on the brain and heart by cutting off the supply of blood from the surface of the body and the brain.

How can you recognize shock?

The skin is moist or even dripping wet; no matter how cold it is or warm, the patient is cold and clammy; the pulse is very rapid; he is not thirsty and rarely complains of pain, even if something is broken. If he is restless and says he is "feeling fine," look out—don't be fooled by him, as then shock is more severe.

(Prepared by the Fracture Committee, Texas State Medical Association; sponsored by Texas State Highway Department and Texas Public Safety Commission.)

EYE CARE DURING CONVALESCENCE

Amusements that are restful to the eyes are best for convalescent children, Constance J. Foster, Great Neck, N. Y., suggests in *Hygeia, The Health Magazine.*

"During convalescence from any prolonged or serious sickness," she points out, "the eyes are weak and in need of special protection from strain. Yet this is the time when the child is frequently given books to read or amusements that require close visual application. It would be wiser to encourage periods of rest for the eyes by reading aloud to the child or providing him with projects that do not overtax the already weakened nerves and muscles of the eye."

REGION II, AMERICAN ACADEMY OF PEDIATRICS MEETING

Region II of the American Academy of Pediatrics, which combines most of the southern and southeastern states, will hold its regular meeting at Richmond, Virginia, April 24 and 25. This regional meeting will not be for Academy members alone; any physician interested in pediatrics who is a member in good standing of his county medical society, is cordially invited to attend. The program will be announced later. Dr. E. G. Schwarz, Medical Arts Building, Fort Worth, and Dr. William Boyd Reading, 2202 Avenue M., Galveston, co-chairman of the American Academy of Pediatrics for Texas, will be glad to furnish further information upon request.

SOLUBLE IODOPHTHALEIN FOR CARRIERS OF TYPHOID AND PARATYPHOID

In reporting an apparent cure of a typhoid carrier by means of the drug soluble iodophthalein, James R. Enright, M. D., Honolulu, T. H., in *The Journal of the American Medical Association* for January 18 states that his case is an additional indication that further trial of this substance is warranted in typhoid and paratyphoid carriers. A previous report by two other authors cited its apparent success in a carrier of paratyphoid, a disease similar to typhoid.

After only three doses of the drug by mouth, the stools of Dr. Enright's patient were negative for the typhoid organisms. They will be checked for at least a year, he says, and if they continue to be free of organisms the patient will then be classified as carrier free.

"No conclusions can be drawn from this single case," Dr. Enright points out, "but it seems that the result in this case warrants the trial of this comparatively harmless treatment on carriers of the typhoid-paratyphoid group before surgical treatment (spleen removal) is considered."

SPECIAL EXHIBITS A.M.A. CLEVELAND SESSION

The Committee on Scientific Exhibit of the American Medical Association announces in the December 28 issue of *The Journal* of the Association that there will be two special exhibits at the Association's Ninety-Second Annual Session, to be held in Cleveland June 2-6, 1941.

These special exhibits will be on fractures and on lame backs. The Special Exhibit on Fractures will be presented by a committee headed by Kellogg Speed, M. D., Chicago. Dr. Speed will be assisted by Frank D. Dickson, M. D., Kansas City, Mo., and Walter Estell Lee, M. D., Philadelphia.

Frank R. Ober, M. D., Boston, is chairman of the committee which will sponsor the Special Exhibit on Lame Backs. Other members of this committee, who will work with Dr. Ober, are Carl E. Badgley, M. D., Ann Arbor, Mich.; J. Archer O'Reilly, M. D., St. Louis; Arthur Steindler, M. D., Iowa City, Iowa, and Philip D. Wilson, M. D., New York.

NEW TYPE OF CHRONIC PERITONITIS

A new type of chronic peritonitis (inflammation of the membrane lining the abdominal cavity and organs), apparently due to an intestinal infection, is described by Anthony Bassler, M. D., New York, in *The Journal of the American Medical Association* for January 4.

In his report of three cases he says that an extensive search of the literature has failed to reveal similar cases.

Apparently the condition is not common. It is characterized by continued illness with persistent abdominal pain, the absence of constitutional symptoms and the presence of a fair state of health.

The responsible bacteria in the peritoneal cavity seem to be of the mixed type in which Staphylococcus albus is prominent.

Improvement occurred in two cases following the formation of a fistula, a deep ulcer, in these cases leading from the small intestine to the surface, which brought about constant drainage of the small intestine.

NATIONAL CONFERENCE ON MEDICAL SERVICE

National Conference on Medical Service, formerly the Northwest Regional Conference, will hold its fifteenth annual meeting at the Palmer House, Chicago, February 16. Dr. Forrest L. Loveland, Topeka, Kansas, president, and Dr. Harold M. Camp, Monmouth, Illinois, secretary, will arrange the program for the meeting and will announce the speakers in a short time.

Five basic subjects will be presented in the form of symposiums, with time available for question and answer periods. The subjects are: (1) Voluntary Group Medical Care Programs, (2) Medical Preparedness, (3) Post Graduate Plans of State Medical

Societies, (4) Medical Legislative Problems and (5) Medical Care for Social Security Clients.

During the meeting a short talk has been scheduled to be given by Mr. C. H. Wantz of the General Electric X-Ray Corporation, and President of the Medical Exhibitors Association, on the subject, "The Annual Meeting from the Standpoint of the Exhibitor."

Any physician desiring a program will be placed on the mailing list on request to either the president or secretary.

LIBRARY NOTES

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Requests for packages should be addressed "Library, State Medical Association of Texas, 1404 W. El Paso Street, Fort Worth, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Only one package may be borrowed at a time, and packages are allowed to remain in the hands of the borrower for 14 days.

Package Service

Packages were mailed to the following from the Library of the State Medical Association in January:

Dr. Heinrich Lamm, La Feria—*Diarrhea* (13 articles; *Colitis, Mucous* (12 articles); (1 book); *Scapula* (1 article); (1 book, 2 journals).

Dr. F. B. Malone, Lubbock—*Otorhinolaryngology* (4 articles).

Dr. J. L. Dewitt, Mercedes—*Dementia Praecox, therapy* (6 articles).

Dr. D. D. Lancaster, Muleshoe—*Radium and X-Ray* (7 articles).

Dr. R. L. Johnson, Pittsburg—*Milk* (12 articles).

Dr. Fred Harrell, Olney—*Cancer* (6 articles).

Dr. Elizabeth Donaldson, Del Rio—*Infection, therapy* (1 article).

Dr. T. P. Churchill, Amarillo—*Anemia, splenic* (10 articles).

Dr. L. T. Cox, El Paso—*Gastro-Intestinal Tract, diseases* (7 articles).

Dr. O. J. Emery, Rule—*Syphilis* (8 articles).

Dr. F. T. McIntire, San Angelo—*Purpura, Schonlein-Henoch's* (13 articles).

Dr. T. C. Cole, Huntsville—(7 journals).

Dr. Ben M. Shelton, Brownwood—*Brain, hemorrhage* (13 articles); *Carbon Monoxide, poisoning* (24 articles).

Dr. W. E. Ryan, Midland—*Tetanus* (35 articles).

Dr. Clara G. Cook, San Antonio—*Cripples, care of* (21 articles).

Dr. E. C. Stoeltje, Rosebud—*Syphilis* (6 articles).

Dr. G. E. Glover, Austwell—*Encephalitis, Epidemic* (26 articles).

Dr. W. B. Adamson, Abilene—*Suprarenals, tumors* (18 articles).

Dr. A. L. Ridings, Sherman—*Medicine, socialized* (13 articles).

Dr. Evelyn G. Powers, Amarillo—*Ephedrine* (4 articles).

Dr. A. W. Harris, Dallas (1 book).

The Samuell Clinic, Dallas—*Angina, agranulocytic* (13 articles).

Dr. Otto Juhl, Jr., Vernon—*Myelitis* (11 articles).

Dr. M. B. Brandenberg, Seguin—*Medicine, preventive* (13 articles).

Dr. C. E. Adams, Abilene—*Uterus, abnormalities* (11 articles).

Dr. Paul K. Conner, Jacksboro—*Surgery, plastic* (8 articles).

Dr. Ralph H. Eisaman, Brownsville—*Fruit* (5 articles).

Dr. James L. Reveley, San Antonio—*Sterility* (21 articles).

Dr. S. W. Mantzel, Giddings—*Blood Pressure, high* (28 articles).

Dr. J. J. Muirhead, Vernon—*Blood Pressure, high* (30 articles).

Dr. Charles W. Pemberton, Houston—*Life, duration* (10 articles).

Dr. Donald H. McDonald, Abilene—*Adolescence* (9 articles).

Dr. J. E. Smith, Weatherford—*Sacro-Iliac Joint* (21 articles).

Dr. Leslie M. Smith, El Paso—*Anaphylaxis and Allergy* (10 articles).

Dr. R. T. Reinke, Baytown—*Vitamin B* (15 articles).

Dr. T. J. Crowe, Dallas—(2 articles).

Dr. A. C. Rogers, Vernon—*Pregnancy, kidney complications* (12 articles).

Dr. Rufus C. Whiddon, Gainesville—*Medicine, progress* (4 articles).

Dr. O. C. Egdorf, Wichita Falls—(6 journals).

Dr. A. B. Goldston, Amarillo—*Anemia, splenic* (8 articles).

Dr. Douglas Moore Bush, Dallas—*Estrogens* (16 articles).

ACCESSIONS

The Commonwealth Fund, New York—Moodie: The Doctor and the Difficult Child; Smith: Plague On Us.

National Board of Medical Examiners: Quarter Century of Progress.

J. B. Lippincott Company, Philadelphia—Gutman: Modern Drug Encyclopedia and Therapeutic Guide.

Doubleday, Doran and Company, New York—Vaughan: Strange Malady, The Story of Allergy.

W. B. Saunders Company, Philadelphia—Graybiel and Smith: Electrocardiography in Practice.

SUMMARY

Reprints received, 1831.	Local users, 64.
Journals received, 129.	Borrowers by mail, 41.
Items consulted, 252.	Packages mailed out, 46.
Items taken out, 366.	Items mailed out, 523.

Total items consulted and loaned, 1,041.

MEDICINAL REMEDIES

NEW AND NONOFFICIAL REMEDIES

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Nonofficial Remedies:

Aminophylline-Merrell.—A brand of aminophylline-N. N. R. (New and Nonofficial Remedies, 1940, p. 555). It is supplied in the form of Ampuls 0.48 Gm. (7½ grains), 2 cc., and 0.24 Gm. (3¾ grains), 10 cc. Wm. S. Merrell Co., Cincinnati, Ohio.

Tablets Ascorbic Acid-Squibb, 100 mg.—Each tablet is equivalent to 2,000 International units of vitamin C. E. R. Squibb & Sons, New York, N. Y.

Ampoules Sodium Cacodylate-Endo, 0.065 Gm. (1 grain), 1 cc.—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1940, p. 109) 0.065 Gm.; benzyl alcohol 1 per cent is added for its local anesthetic effect. Endo Products, Inc., Richmond Hill, N. Y.

Ampoules Sodium Cacodylate-Endo, .013 Gm (2 grains), 1 cc.—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1940, p. 109) .013 Gm.; benzyl alcohol 1 per cent is added for its local anesthetic effect. Endo Products, Inc., Richmond Hill, N. Y.

Ampoules Sodium Cacodylate-Endo, 0.2 Gm. (3 grains), 1 cc.—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1940, p. 109) 0.2 Gm.; benzyl alcohol 1 per cent is added for its local anesthetic effect. Endo Products, Inc., Richmond Hill, N. Y.

Ampoules Sodium Cacodylate-Endo, 0.3 Gm. (5 grains), 1 cc.—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1940, p. 109) 0.3 Gm.; benzyl alcohol 1 per cent is added for its local anesthetic effect. Endo Products, Inc., Richmond Hill, N. Y.

Ampoules Sodium Cacodylate-Endo, 0.5 Gm. (7½ grains), 1 cc.—Each ampoule contains sodium cacodylate (New and Nonofficial Remedies, 1940, p. 109) 0.5 Gm.; benzyl alcohol 1 per cent is added for its local anesthetic effect. Endo Products, Inc., Richmond Hill, N. Y.

Tablets Thiamine Hydrochloride-Abbott, 9 mg.—Each tablet contains 3,000 U.S.P. units of thiamine hydrochloride (New and Nonofficial Remedies, 1940, p. 529). Abbott Laboratories, North Chicago, Ill.

Tablets Thiamine Hydrochloride-Abbott, 12 mg.—Each tablet contains 4,000 U.S.P. units of thiamine hydrochloride (New and Nonofficial Remedies, 1940, p. 529). Abbott Laboratories, North Chicago, Ill.—*J. A. M. A.*, Sept. 21, 1940.

ACCEPTED DEVICES FOR PHYSICAL THERAPY

The following devices have been accepted by the Council on Physical Therapy of the American Medical Association for inclusion in its list of accepted devices for physical therapy:

Sears S-4 Sunlamp.—This sunlamp produces ultraviolet radiation and consists of a standard mazda S-4 type bulb together with a standard reflector following the curvature and reflection specifications. The type S-4 mazda sunlamp consists of an electric arc discharge through mercury vapor between activated metal electrodes sealed in a small quartz capillary tube, which in turn is enclosed in a bulb of special glass that is opaque to ultraviolet radiation of short wavelengths. It operates on alternating current, but it requires an intermediary, especially designed, transformer to maintain the proper voltage and operating temperature. A mild erythema is produced in six minutes exposure at 24 inches. Northern Electric Company, Chicago, manufacturer; Sears, Roebuck and Company, Chicago, distributor.—*J. A. M. A.*, Sept. 7, 1940.

Driflash Electro-Sugical Unit.—The Model C-100 Driflash is a spark gap electrosurgical unit intended for desiccation and fulguration by the monopolar technic only. It is a portable model, operated by a foot switch. Clinical investigation of the unit revealed that it gave satisfactory service. General Automatic Corporation, Macedonia, Ohio.—*J. A. M. A.*, Sept. 14, 1940.

Westinghouse Sunlamp Model No. Es2404.—This sunlamp, containing an S-4 type lamp, provides ultraviolet radiation of an intensity and spectral distribution rendering it suitable for unsupervised use by the layman. The type S-4 Mazda sunlamp bulb consists of an electric arc discharge through mercury vapor, between activated metal electrodes sealed in a small quartz capillary tube, which in turn is enclosed in a bulb of special glass and is opaque to ultraviolet radiation of short wavelengths. It operates on alternating current but it requires an intermediary, especially designed, transformer to maintain the proper voltage and operating temperature. A mild erythema is obtained in six minutes at 24 inches. Westinghouse Electric and Manufacturing Company, Bloomfield, N. J.—*J. A. M. A.*, Sept. 21, 1940.

Continental Ultra Short Wave Unit Model SW-100.—This unit is used for medical and surgical diathermy. Pads, cuffs, inductance coil, surgical accessories and metal electrodes are supplied as standard equipment. The unit operates on approximately 6 meters and utilizes two tubes in a self-rectifying push-pull, tuned plate, tuned grid oscillating circuit. Clinical investigation of the unit revealed that it gave satisfactory service. Bedford Surgical Company, Inc., Brooklyn, N. Y.

General Automatic E-40 Lamp.—An infra-red generator mounted in a reflector having a polished metal reflecting surface. The reflector is mounted on an adjustable arm. The maximum height of the stand is 71½ inches. The lamp was found to give a very intense heat at what is considered a comfortable distance with other infra-red lamps. If placed at a greater distance or angled away from the area to be treated the heat is then comfortable and pleasant. It is necessary to exercise caution when using this lamp owing to the intense heat. The lamp is bottom heavy and will not tip easily. General Automatic Corporation, Macedonia, Ohio.

Rose "Quartz-X" Ultraviolet Lamp.—This lamp produces ultraviolet radiation and is in the general class of "cold" or low pressure ultraviolet generators. It is a floor model type and is adjustable. It has two burners, one of fused quartz, the other of ultraviolet transmitting glass (Corex). Physiologic tests on untanned abdominal skin gave minimum perceptible erythema in the following time: Quartz burner, 90 seconds; Corex burner, 240 seconds; both burners, 75 seconds. E. J. Rose Manufacturing Company, Inc., Los Angeles, Calif.—*J. A. M. A.*, Sept. 28, 1940.

PROPAGANDA FOR REFORM

Progress Report of the Consultants on Audiometers and Hearing Aids of the Council on Physical Therapy of the American Medical Association.—In 1936 at the suggestion of the late Dr. Austin A. Hayden, the Council on Physical Therapy was authorized by the Board of Trustees of the American Medical Association to appoint a group of consultants having special training and experience in the field, to assist in setting up minimum requirements for acceptance of audiometers and hearing aids and to help in the consideration of them as well as the conservation of hearing. Appointed as consultants were Drs. George M. Coates, Lee W. Dean, Edmund P. Fowler, Isaac H. Jones, Douglas Macfarlan, Horace Newhart, Burt R. Shurly and William P. Wherry. C. C. Bunch, Ph. D., took over the work of Dr. Dean at the latter's request, and Dr. C. Stewart Nash was appointed as a consultant in July, 1939. Paul Sabine, Ph.D., of the Riverbank Laboratories, and W. C. Beasley, Ph.D., of the United States Public Health Service, have given generous assistance to the Council. What proved to be a very effective method of promoting mutual understanding between otologists and hearing aid manufacturers was a series of joint meetings of representatives of each group. In all, three meetings have been held with most creditable results. By far the greatest volume of the work and the majority of the deliberations have been carried on by correspondence. As a result of this work the Council on Physical Therapy and the Consultants on Audiometers and Hearing Aids have made the following advancements in the consideration of audiometers and hearing aids and the conservation of hearing:

1. Minimum requirements for acceptable audiometers have been formulated and adopted. The requirements have received universal acceptance on the part of otologists and manufacturers.

2. Three audiometers for diagnostic use have been investigated and accepted.

3. Requirements for acceptable hearing aids have been formulated and adopted.

4. Hearing aids have been investigated and accepted or rejected and this information has been made available to the profession and the public.

5. A survey of methods for determining the percentage of disability due to deafness has been started. The House of Delegates at the St. Louis session endorsed the work accomplished and objectives aimed at.

6. Information on devices used for treatment of hearing loss has been made available (e.g., stimulation of hearing by sound).

7. Advertising of acceptable hearing aids and audiometers has been reviewed, considered and criticized and much undesirable copy has been eliminated.

8. The Council has assured high standards of construction, workmanship and material.

Finally, the Council desires to express its appreciation to the Consultants on Audiometers and Hearing Aids for the valuable assistance that has been rendered by them for the past two years, and also to the several general and special medical societies for their coöperation.—*J. A. M. A.*, Sept. 7, 1940.

Chemotherapy of Syphilis by Massive Dose Intravenous Drip.—Recent studies have been made of the use of Mapharsen, a simplified derivative of arsenoxide, for the continuous treatment of syphilis over a period of days (the so-called drip method). The principle of this new advance in syphilotherapy is based on the ability through continuous drip therapy to utilize doses of arsenicals far larger than can ordinarly be safely administered to human beings. In view of the interest in this method and the results which have been reported, the Council on Pharmacy and Chemistry deemed it advisable to make a preliminary report. The Council reports that in 1933 Hyman, Chargin and Leifer (Am. J. M. Sc. 197:480, April, 1939) treated twenty-five persons who had early syphilis by means of the intravenous drip given in the form of solutions of 4 Gm. of neoarsphenamine over a course of five days. The results were promising, so promising that a larger group of patients—eighty-six—were treated with neoarsphenamine. Arsphenamine was not found to be practicable because of irritation of the vein walls. Response to therapy was gratifying, lesions healed rapidly, spirochetes disappeared in less than twenty-nine hours. Of the patients adequately followed, 86 per cent showed complete seroreversal. There were five acknowledged failures in the two groups. However, the frequency of toxic symptoms was so high that the group, in consultation with the Committee on Massive Drip Intravenous Therapy (which had been formed to gain the help and advice of public health authorities, of several foundations and of clinicians in other institutions and in other capacities), thought it best to utilize another arsenical, Mapharsen. This arsenical has been used in 283 further cases. In the earlier ones the dosage was too small, resulting in a certain number of relapses. The dose now being employed, 0.24 Gm. of Mapharsen a day for five days, is giving a satisfactory clinical result, although the time elapsed is too short to predict what the final five year results will show. There has been a notable drop in toxic effects as compared to those seen with neoarsphenamine. Yet one of the dreaded complications, hemorrhagic encephalitis, was still noted in three of 283 cases. Fortunately, only one of these was severe. No fatalities resulted from the use of Mapharsen.

The Council report also calls attention to some work done abroad by Tzanck and his collaborators. The technic used by these investigators consisted in the use of 0.01 Gm. of neoarsphenamine per cubic centimeter of physiologic solution of sodium chloride, one drop given every three seconds. Patients were then given two months of bismuth therapy and another three days of arsenical treatment as described. No details were given as to follow-up and study of the patients, and at least as far as publications are concerned this work does not show the care and detail used by Chargin, Leifer and Hyman.

In the opinion of the Council on Pharmacy and Chemistry the work of Chargin, Tyman, Rice and Leifer with continuous intravenous drip massive doses of arsenicals in the treatment of early syphilis offers great possibilities. In view of the frequency of toxic reactions, some of them grave in type, the Council believes a conservative attitude of the medical profession to be advisable. Such a form of syphilis therapy is still in the experimental stage and should be confined to large university and public health clinics or suitable hospitals organized to carry on this project on a recognized experimental plane. —*J. A. M. A.*, Sept. 7, 1940.

Poison Ivy Dermatitis.—An alkaline vanishing cream containing a nonirritant, nonstaining oxidizing agent such as sodium perborate or potassium periodate is now recommended as an effective preventive against poison ivy dermatitis. By incorporating either of these drugs in an ointment and applying it to the skin of the arms and the face before exposure, even those who are previously ascertained to be highly susceptible may be effectively protected. Preliminary tests on a limited number of volunteers with a 10 per cent sodium perborate ointment, to which a poison ivy extract of well known manufacture representing a concentration fifteen times greater than that of the toxin in the fresh leaf was applied, failed to elicit reactions. After satisfactory performance in the laboratory, the prophylactic cream was tested by actual contact and handling of poison ivy foliage. An hour later the cream was washed off with soap and water; reactions did not occur. The United States Public Health Service, which developed this technic, recommends that vanishing creams containing oxidizing agents such as those referred to be prepared for use at least every two weeks to avoid deterioration. They should be rubbed well into the skin of the arms and face before each exposure. Soap and water used to remove the deposit of the powdered oxidant on the skin will emulsify it and wash away whatever toxins are lodged in the pores or on the skin.—*J. A. M. A.*, Sept. 7, 1940.

Five Day Treatment of Early Syphilis.—In *The Journal of the A. M. A.*, Sept. 7, 1940, p. 857, appears a report by the Council on Pharmacy and Chemistry of the American Medical Association relative to the so-called five day treatment for early syphilis. Obviously there are considerable advantages in any method of treatment of syphilis which can be completed in a brief period of time, so that the results, if even approximately comparable to those obtainable with systems of treatment requiring months or years, are likely to bespeak for such a method the most favorable consideration. However, there seems to be a chance equivalent to about one in a hundred that patients treated with this technic with either neoarsphenamine or mapharsen may develop in a more or less severe form one of the most serious of all arsenical reactions—hemorrhagic encephalitis. Moreover, in patients treated by this technic, peripheral neuritis was encountered in 35 per cent of patients given neoarsphenamine and in 1.7 per cent of those given mapharsen by the intravenous drip method. Fevers and toxicodermas also occurred. Obviously, many more studies will need to be made both of patients under controlled conditions in hospitals and of animals in the laboratory to establish definite criteria for the use of this new technic.—*J. A. M. A.*, Sept. 7, 1940.

Bromides in Medicine.—Recently bromide intoxication has become so prevalent that there is no longer any question that the various bromide prep-

arations possess distinctive effects, especially on the central nervous system. A frequent cause of intoxication is continued self medication by patients using prescriptions issued by physicians to alleviate the chronic suffering of the alcoholic addict or psychoneurotic individual. This should constitute an ample warning against any desire for casually prescribing a bromide preparation for headaches, insomnia, restlessness or so-called nervousness without cautioning patients about "follow-up" visits. The new Food, Drug and Cosmetic Act provides that drug labeling must carry "adequate directions for use" and "adequate warnings." The following label has been suggested as an example, to be suitable for preparations containing bromides sold "over the counter" without a physician's prescription and which are considered to be so dangerous with careless use that they should be sold only on a doctor's prescription.

Warning: Frequent or continued use may lead to mental derangement, skin eruptions or other serious effects.

Do not take more than the dosage recommended.

Not to be taken by those suffering from kidney disease.

It is the belief of the Food and Drug Administration that bromides may be considered dangerous drugs under section 502 (j) of the act if an equivalent to 15 grains (1 Gm.) of sodium bromide is taken in a single dose or if the total daily dosage is equivalent to 30 grains (2 Gm.) with an interval of not less than three hours between single doses. These restrictions do not, of course, apply to prescriptions issued by physicians. Bromide intoxication does vary with the individual. One person may take rather large quantities of bromide over a period of time with relatively little accumulation in the blood stream, while another person may take relatively small quantities over the same period with large accumulation. Continued intake of significant quantities of bromides over indefinite periods inevitably leads to accumulaton of bromides in the blood stream. Individuals may therefore be afflicted with symptoms of bromide intoxication from frank bromide poisoning to the intangible symptoms of irritability, tendency to dizziness, confusedness and vagueness of thinking. Other symptoms which have been reported include inability to concentrate, loss of ambition and interest in work and surroundings, hallucinations, disorientation and suicidal or homicidal impulses. The latter symptoms are all a part of the bromide psychosis. There is no need for hysteria over the unwarranted use of preparations containing potentially dangerous ingredients, but there is need for restricted self medication.—*J. A. M. A.*, Sept. 14, 1940.

Hemolytic Streptococcus Antitoxin-Globulin-Lederle-Modified Not Acceptable For N.N.R.—The Council on Pharmacy and Chemistry reports that Hemolytic Streptococcus Antitoxin-Globulin-Lederle-Modified was presented for the Council's consideration as a combination of hemolytic streptococcus antitoxin of broad valence identified as scarlet fever streptococcus antitoxin and erysipelas streptococcus antitoxin. The product was proposed for use in the treatment of severe and toxic cases of beta-hemolytic streptococcus infections, alone or as combined treatment using sulfanilamide for puerperal fever, erysipelas, septic sore throat, cellulitis and streptococcic pneumonia. Question was raised by the Council as to the specificity of toxins of various strains of streptococci as the firm had presented no clinical evidence that hemolytic streptococcus antitoxin will be of great value in any streptococcic infection except scarlet fever. Various passages in the advertising submitted by the firm were criticized and recommended to be deleted on account of the foregoing. Since Lederle Laboratories, Inc., has not presented adequate clinical evidence to substantiate its claims, the Council declared Hemolytic Streptococcus Antitoxin-Globulin-Lederle-Modified unacceptable for inclusion in New and Nonofficial Remedies because of the lack of clinical evidence to substantiate its claims. —*J. A. M. A.*, Sept. 14, 1940.

Hazards of Bromidism in Proprietary and Uncontrolled Hypnotic Medication: Neurosine (Dios Chemical Company) Not Acceptable for N.N.R.—The Council on Pharmacy and Chemistry reports that the medical profession has been deluged with pamphlets extolling the value of bromides over the barbital preparations. These articles have been sent out by the Dios Chemical Company, promoters of "Neurosine." The author of one of the articles is stated to be Dr. Frederic Damrau. In view of this, the Council calls the attention of the medical profession again to the hazards of bromidism in their indiscriminate use in hypnotic medication. The toxic action of bromides is due to slow excretion or destruction of the drug, with the resultant attainment of a very high level in the body after prolonged administration. It is because of this factor that their indiscriminate use such as in proprietary sedatives has led to so many cases of chronic bromide intoxication. The Council reports that bromide therapy should not be attempted without careful control of the dosage both of bromide and of salt, so that the blood bromide concentration is not allowed to rise above the 125 to 150 mg. per hundred cubic centimeter level, which is the maximum safe therapeutic concentration. Care should be taken that the patient is not allowed to continue bromide medication without supervision. Blood bromide determinations should be carried out on all patients manifesting evidence of symptoms of the organic reaction type, such as confusion or delirium, and appropriate therapeutic measures instituted if toxic concentrations of bromide are found. The Council reaffirmed its action of many years ago declaring "Neurosine" unacceptable for inclusion in New and Nonofficial Remedies because it is a mixture containing bromides sold under a proprietary name with unwarranted therapeutic claims.—*J. A. M. A.*, Sept. 14, 1940.

Preliminary Report on Histaminase: Torantil.—The Council on Pharmacy and Chemistry reports that, according to the literature, Torantil, marketed by Bayer (I. G. Farbenindustrie A. G.), was introduced into this country by the Winthrop Chemical Company as a brand of histaminase. The latter now markets a similar product under the same name but formerly used the provisional designation "T 360" under which identification it has been supplied to investigators in ampule form for experimental use. The concern markets the product in tablets of 5 units each, under the original name Torantil. In this form the preparation was submitted to the Council at its request.

The firm promotes Torantil as an "Antiallergic (Histamine-Detoxicating)" agent of the following description:

> Extract from the mucosa of the small intestines and desiccated kidneys of hogs, containing a histamine destroying enzyme, histaminase, in an active and stable form. Biologically standardized in histamine detoxicating units, one unit being the amount which will inactivate one milligram of histamine hydrochloride during incubation at 37.5 C. for twenty-four hours. Possesses all the known properties of histaminase.

The indications for Torantil are stated as follows:

> For use in the prophylaxis and treatment of allergic disorders, including asthma, hay fever (vasomotor rhinitis), urticaria, gastrointestinal disturbances, serum sickness, angioneurotic

edema, atopic dermatitis, eczema, hypersensitivity to insulin, drugs and physical agents such as cold, heat and light. Also employed in acne vulgaris.

The Council reviewed the thirty-seven references submitted by the firm and concluded that the use of histaminase in the treatment of allergic states, although perhaps ingenious and suggestive, has no well established scientific clinical basis. In attempting to evaluate the clinical evidence, the Council is confronted with conflicting data. Some physicians report success in one condition and others a lack of it, although enthusiasm is expressed in most of the reports available. What is lacking is a thoroughgoing study over a sufficient period (most of the case reports have been collected during the past year), alternating placebos with the histaminase to see if the effect is real or fanciful. In some of the reports, lack of success is attributed to low potency, though the firm now assures the Council that it has worked out the problems of uniform potency. The unpredictability and variability of allergic phenomena causes the Council to pursue a conservative course toward the efficacy of histaminase in the treatment of these conditions. In any event the name Torantil is meaningless and is not acceptable. The Council does not wish to discourage further experimental investigation of histaminase under rigidly controlled conditions.

The Council voted that, as a brand of histaminase, Torantil lacks evidence to justify its present inclusion in N.N.R.; further, that it is marketed under an objectionable name with claims which are not justified. The Council decided to hold in abeyance further consideration of histaminase and of Torantil until the development of further evidence.—*J. A. M. A.*, Sept. 21, 1940.

Some Fraudulent "Cancer Cures."—The Bureau of Investigation of the American Medical Association reports that in recent months the United States Post Office Department has uncovered the following fraudulent "cancer cures" and debarred them from the mails:

Saurinal Oil and Salve.—The Saurinol Distributors Corporation and John H. Olmes, Secretary, at Colorado Springs, Colo., and John H. Olmes at Pueblo, Colo., sold products through the mails under the false representations that they would overcome and cure exposed cancer and many other conditions. According to the promoters, Saurinol Oil was the unrefined product of three wells located in Fremont County, Colo., and the salve was prepared for them by a chemist in Colorado Springs. A government chemist's analysis of liquid Saurinol showed it to be a burning mineral oil containing 0.09 per cent of cinchona alkaloid, with a small amount of asphalt and a trace of ichthyol; and the Saurinol Salve to contain 1.6 per cent of camphor and turpentine in a base of petrolatum and beeswax, with traces of paraffin and ichthyol. Expert medical testimony introduced at the hearing showed that, aside from forming a protective covering for skin lesions both the Saurinol products would act merely as astringents and counterirritants and would be without therapeutic effect in the treatment of any cases of cancer or other disorders for which they were promoted. On February 29, 1940, a fraud order was issued. In July, 1939, another government agency, the Food and Drug Administration, seized in interstate commerce a consignment of Saurinol that had been shipped by the Saurinol Distributors Corporation and charged that false and misleading statements on the label were a violation of the Food, Drug and Cosmetic Act. As the Saurinol concern put up no defense the shipment was confiscated.

The Grafanol Fraud.—From Durant, Okla., an outfit operating under the titles Grafanol Company and Grafanol Corporation, and run by one W. F. Grafa, sold "Grafanol Ointment" through the mails under the false and fraudulent representations that it was a highly effective remedy and cure for any case of skin cancer and many other disorders, chiefly those of the skin. The concern also sold by mail something called "Maytubby Springs Sour Water," which it fraudulently represented as a highly effective remedy and cure for any case of stomach trouble, kidney trouble, rheumatism or eczema. A government chemist reported that Grafanol was a black viscous mixture of petrolatum products, water, sand and calcium oxide. The government's medical expert testified that the stuff would not and could not cure any case of cancer or blood poisoning. The government chemist also analyzed Maytubby Springs Sour Water and testified that it contained 0.156 Gm. per hundred cubic centimeters of sodium sulfate, with traces of chloride, iron and other minerals, not named. The medical expert mentioned also testified that this water would have no therapeutic action whatever, that its use was merely equivalent to the taking of an equal quantity of ordinary tap water. The fraud order was issued May 23, 1940. An outfit known as R. F. Grafa & Sons, Durant, Okla., which may have been an earlier name for the same concern, was declared by federal authorities in 1932 to have violated the Pure Food and Drugs Act in fraudulently representing on the labels of its Grafanol Ointment that this was a remedy for skin cancer and many other disorders.

Sussman's Dietary "Cancer Cure."—Ben Sussman of New York, operating as the Lujen Publishing Co., put out a volume "My Fight Against Cancer." Because the claims were so obviously fakish, the Post Office Department declared its sale to be a scheme for obtaining money by means of false and fraudulent pretenses, representations and promises and debarred it from the mails. According to Sussman's book, he cured himself of cancer by his vegetable and fruit diet. He writes: "I used carrot juice with certified milk and a little evaporated milk, according to taste, about a quart a day, and I found this to be the most alkaline food for one suffering from tumors or cancer. Within a few weeks I realized that the pains in my stomach and in my entire body were gradually disappearing." Sussman's testimony at the government hearing was found to be so irrational as to deserve little if any credence. For that reason the acting solicitor for the Post Office Department who handled this case was convinced that Sussman had never had cancer. Typical of his erratic testimony was his assertion that although he regarded cancer as first in the order of maladies causing fatalities in this country, he did not consider it a "serious disease." Although he claimed to base his "cure" on combinations of vegetables and fruits, he was unable to name even the primary constituents of foods. Expert medical testimony introduced at the hearing showed, according to the Post Office Department, that if persons having cancer undertook the treatment Sussman recommended, the result would be early and in many cases unnecessary death of such persons. As Sussman conducted his swindle under the title of the Lujen Publishing Company, the fraud order issued March 7, 1940, unfortunately covered only this name and not that of Sussman as an individual.—*J. A. M. A.*, Sept. 21, 1940.

Dark Ages Still With Us.—During the past year the Post Office Department has issued fraud orders against the following concerns who have been promoting a remedy or a line of remedies for the treatment of practically everything, including such

diseases as asthma, anemia, bladder diseases, cancer, diabetes, eye diseases, female disorders, hemorrhoids, high blood pressure, kidney diseases, malaria, piles, pyorrhea, rheumatism, sores, stomach troubles, diphtheria, tuberculosis, sleeping sickness, insanity, syphilis, etc.:

Arrowhead Indian Herbs Company (Dewey Conway, Jodie Conway), Chico, Calif. (Remedies named: Remedy No. 19-D; No. 28-D; No. 138-D; No. 240-D; No. 297-D; No. 6-D; No. 7-D; No. 14-D; No. 104-D; No. 39-L).

Botanical Medicine Company (Dr. W. B. Goebel), Kannapolis, N. C. (Remedies named: Gall Bladder Special; Pyorrhea Treatment; Trifolium; Lav-I-Ton; Ironite; Black Spirit; Femidyne; Ey-No-La; Hem-I-Rin; Kre-Cal).

Crocker's Asthma & Lung Trouble Medicine Company (James Crocker), Indianapolis. (Remedies named: Drinking Water No. 29; Syrup No. 377; Tea No. 370).

H. W. Lange & Son (Lange & Son, F. W. Lange), Portland Ore. (Remedies named: Lang's Mineral Wonder; Lang's Mineral Ointment; Lang's Female Suppositories).

Morehead & Co. (E. H. Morehead & Co.), Denver. (Remedies named: Rocky Mountain Mineral Wonder; Mineral Wonder Laxative).

Prof. C. A. Isbell, Colfax, Calif. (Remedies named: Isbell's Mineral).

Theodore M. Moore (Prof. Theodore M. Moore), Davenport, Iowa. (Remedies named: Big 4 Wonders Indian Remedies; Spirit Lake Salts; Big 4 Wonders Iron Tonic; Black Bath Mineral; X X White, Mineral; Stomach Capsules; Vaginal Suppositories; Mineral Laxatives).—*J. A. M. A.*, Sept. 28, 1940.

Double-Barreled Self Medication.—The new Food, Drug and Cosmetic Act requires declarations on the label of all active ingredients. Furthermore, this legislation requires the declaration of the amounts of some drugs, and included in this list are both acetanilid and acetophenetidin. A number of preparations on the market have combined the "virtues" and, more significantly, the dangers of acetophenetidin and significant amounts of bromides. Such preparations are doubly dangerous; they accustom the user to the taking of bromides and thus insure a continued dosage of acetanilid. The results in some cases have been disastrous. The new Food, Drug and Cosmetic Act also requires qualitative and quantitative declaration of the presence of bromides. Thus the new act has clearly indicated that these drugs are sufficiently potent to require quantitative declarations on the label. There is, however, a stipulation in the new act wherein it is stated that a drug or device shall be deemed to be misbranded if it is dangerous to health when used in the dosage, or with the frequency or duration prescribed, recommended or suggested in the labeling thereof. A release of the United States Department of Agriculture dated March 28, 1939, included the following sentence: "Actions against drugs alleged to be dangerous and to violate the new law included 3 bottles of Cal-Co-Din, a pain-killer containing cinchophen; 488 packages of B. C. Headache Powders, 11,325 bottles of Bromo-Seltzer, and 3,526 packages of Stanbach Headache Powders, all of which contained, among other ingredients, bromides and acetanilid." It is noteworthy that the seizure of B. C. Headache Powders referred to above has resulted in a Notice of Judgment being issued on the basis that the powders "would be dangerous to health when used in the dosage or with the frequency or duration prescribed, recommended or suggested in the labeling," and because the "labeling failed to reveal facts material with respect to the consequence which might result from the use of the article under the conditions of use . . . and failed to bear warnings against use in pathological conditions where its use might be dangerous to health or against unsafe dosage or duration of administration." Drugs like acetanilid and the bromides are useful when prescribed by the physician in an individual case to meet certain immediate requirements. Such use is not comparable to promiscuous use by the layman. According to Useful Drugs, a publication addressed to physicians, it is suggested that the physician start with a dose of 1½ grains. These manufacturers start patients about whose physical condition they know nothing about with 2½ grains. However thoroughly labeled, such a double-barreled instrument of self medication represents infinite potentialities for harm through promiscuous use by the uninformed lay person.—*J. A. M. A.*, Aug. 3, 1940.

NEWS

Joanna McClelland Memorial Hospital Staff, Waco, elected the following officers recently for the ensuing year: Chief of Staff, Dr. Wilson Crosthwait; assistant chief of staff, Dr. M. B. Aynesworth, and secretary, Dr. Clayton J. Traylor.—*Waco News-Tribune.*

City-County Hospital Staff, Fort Worth, elected the following officers recently for 1941: Chairman, Dr. Heywood Davis; vice-chairman, Dr. DeWitt Neighbors, and secretary, Dr. Mal Rumph.

Drs. Sim Hulsey and Jarrell Bennett were chosen new members of the executive board.—*Fort Worth Star-Telegram.*

Municipal Hospital Staff, Ennis, elected the following officers recently for 1941: Chairman, Dr. A. J. Cox (re-elected); vice-chairman, Dr. J. Lawrence Clark, and secretary, Dr. John M. Chapman.—*Ennis News.*

Venereal Disease Clinic for Navarro County.—A venereal disease clinic was opened January 1, at Corsicana, under the sponsorship of the Navarro County Medical Society, advises the *Corsicana Sun.* The Clinic will be operated with funds received from Navarro County, the State Health Department and the United States Public Health Service. Only patients referred by their family physicians and certified as unable to pay will be treated. A registered nurse will be in charge. The clinic is located in a building recently renovated and repaired with funds provided by the Navarro Community Foundation.

Bethania Hospital Staff, Wichita Falls, recently elected the following officers for 1941: President, Dr. Bailey R. Collins; vice-president, Dr. J. A. Heymann; secretary, Dr. J. A. Little; assistant secretary, Dr. Robert Hargrave. Other members of the executive board, in addition to the officers, are Drs. C. H. Bishop, J. E. Kanatser and G. T. Singleton.—*Wichita Falls Record-News.*

Hendrick Memorial Hospital Staff, Abilene, elected the following officers recently at its annual meeting: Chairman, Dr. W. V. Ramsey; vice-chairman, Dr. B. F. Rhodes; secretary, Dr. E. E. Middleton. The officers named with the following physicians will comprise the executive board: Drs. Frank Hodges, Jack Estes, L. F. Johnson, J. N. Burditt, and W. B. Adamson.

Guests at the meeting were Dr. Alton Oschner, professor of surgery, Tulane University School of Medicine, New Orleans, and Dr. George Hermann, professor of clinical medicine, University of Texas School of Medicine, Galveston.—*Abilene Reporter-News.*

Harris Memorial Methodist Hospital Staff, Fort Worth, elected the following officers for 1941 at its annual meeting recently: Chairman, Dr. Judge M. Lyle; vice-chairman, Dr. A. I. Goldberg; secretary, Dr. Theron H. Funk.—*Fort Worth Star-Telegram.*

Methodist Hospital Staff, Houston, elected the following officers for 1941 at a recent meeting: President, Dr. L. L. D. Tuttle; president-elect, Dr. James Greenwood, Jr.,; vice-president, Dr. W. S. McDaniel, and secretary, Dr. B. B. Smith.—*Houston Post.*

Jefferson Davis Hospital Staff, Houston, elected the following officers for 1941 at a recent meeting: President, Dr. T. R. Hannon; vice-president, Dr. P. H. Scardino; secretary, Dr. John H. Wootters (re-elected); chairman of the surgical division, Dr. Fred Smith, and chairman of the medical division, Dr. E. R. Seale.—*Houston Press.*

New Hospital for Cleveland.—Cleveland Hospital, the first hospital in that city, was formally opened January 2. The building has facilities for nine beds for patients, an operating room, delivery room, x-ray and clinical laboratories, and the usual hospital facilities. The staff will be composed of Dr. Walter Leggett, and his associates, Dr. Clell Holland and Dr. M. K. Leggett of Houston. Mrs. Louise Smith Williams will be superintendent. The hospital will be operated on an open staff basis.—*Cleveland Advocate.*

McLellan County Tuberculosis Clinic.—A clinic for the diagnosis and pneumothorax treatment of tuberculous patients was opened January 9, at the Joanna McClelland Memorial Hospital, Waco. The clinic will be operated under the direction of the McClennan County Tuberculosis Association, and under the supervision of Drs. D. D. Wall, B. M. Aynesworth, Ralph Coffelt, Horace Trippet and C. G. Traylor, all of Waco. Only indigent patients will be treated. The equipment serving the clinic was purchased with funds derived from the Chrismas seal campaign in Waco and McLennan County.—*Waco Tribune-Herald.*

Blood Plasma and Serum Center Established at Baylor Hospital, Dallas.—As a result of a gift of $10,000, made by Dr. and Mrs. Stanley J. Seegar, Milwaukee, Wisconsin, a blood plasma and serum center will be established at Baylor Hospital, according to an announcement made by Dr. E. H. Cary, president of the Southwestern Medical Foundation. The gift, made through the Foundation, is a memorial to the late William Buchanan, father of Mrs. Seegar, whose mother still lives at the family home in Texarkana, Texas. Dr. Seegar is chairman of the Council on Industrial Surgery of the American Medical Association.—*Fort Worth Star-Telegram.*

The New Orleans Graduate Medical Assembly will hold its fifth annual meeting March 3-6, in New Orleans. March 7 will be devoted to clinical instruction in the hospitals of New Orleans.

The Assembly announces the following guest speakers for its 1941 meeting:

Dr. Paul Dudley White, Boston (Cardiology).
Dr. Paul A. O'Leary, Rochester (Dermatology).
Dr. Richard W. TeLinde, Baltimore (Gynecology).
Dr. Ernest E. Irons, Chicago (Medicine).
Dr. Maurice C. Pincoffs, Baltimore (Medicine).
Dr. Arthur H. Ruggles, Providence (Neuropsychiatry).
Dr. Louis E. Phaneuf, Boston (Obstetrics).
Dr. Cecil S. O'Brien, Iowa City (Ophthalmology).
Dr. Paul C. Colonna, Oklahoma City (Orthopedic Surgery).
Dr. W. Wallace Morrison, New York (Otolaryngology).
Dr. Lawrence W. Smith, Philadelphia (Pathology).
Dr. Charles F. McKhann, Ann Arbor (Pediatrics).
Dr. Eugene L. Bishop, Chattanooga (Preventive Medicine).
Dr. George E. Binkley, New York (Proctology).
Dr. Leo G. Rigler, Minneapolis (Radiology).
Dr. Frederick A. Coller, Ann Arbor (Surgery).
Dr. Owen H. Wangensteen, Minneapolis (Surgery).
Dr. George F. Cahill, New York (Urology).

A registration fee of $10 covers all features of the Assembly including lectures, clinics, daily round-table luncheons and the annual smoker. Further information may be secured by addressing the Secretary, Room 105, 1430 Tulane Avenue, New Orleans, Louisiana.

The Texas Radiological Society held its twenty-eighth annual meeting as a memorial to the late Dr. W. G. McDeed, of Houston, at Sherman, January 18, with headquarters at the Grayson Hotel. The scientific program was carried out as published in the January number of the JOURNAL with the single exception of the elimination of the refresher course scheduled as the last item of the afternoon session.

The honor guest speaker, Dr. Fred J. Hodges, professor of radiology, University of Michigan, Ann Arbor, Michigan, who had just returned from the Crocker Laboratory of the University of California, where he had spent six months' sabbatical leave from his duties at the University of Michigan, gave a highly interesting address on the Use of the Cyclotron as a Medical Instrument. Epoch-making strides are being made in the investigation of the value of this apparatus in the production of radioactive elements for medical therapeutic purposes as well as the direct use of the neutron beam in the treatment of malignancies. The possibilities in this field are as yet immeasurable.

Officers of the Society elected for the coming year are: President, Dr. M. H. Glover, Wichita Falls; president-elect, Dr. G. D. Carlson, Dallas; first vice-president, Dr. Palmer E. Wigby, Dallas; second vice-president, Dr. Tom Bond, Fort Worth; and secretary-treasurer, Dr. L. W. Baird, Temple.

Parke, Davis and Company is celebrating its Diamond Anniversary in the year 1941. This firm had its beginning in a small drug store in the city of Detroit, Michigan, and during the past seventy-five years has become one of the world's largest makers of pharmaceutical and biological products. Since its beginning in 1886, Parke, Davis and Company has engaged continuously in research work for the benefit of pharmacists and physicians. In the early seventies it brought forth such valuable and widely used drugs as Cascara and Coca. In 1879 it introduced the first chemically standardized extract known to pharmacy; in 1893, it supplied desiccated thyroid gland; and in 1894 it established the first commercial biological laboratory in the United States. Since the turn of the century, the Company has introduced such important medicinal products as adrenalin, ventriculin, theelin, pitocin, pitressin, mapharsen, neo-silvol, antuitrin-S, meningococcus antitoxin, dilantin sodium, and many others. The Company has carried on continuously diversified research activities and evaluated new discoveries through clinical investigation. In addition to its extensive plant in the United States, Parke, Davis and Company has branches which extend to every quarter of the globe.

Parke, Davis advertising in medical publications is ethical and distinctive. The Company makes no direct attempt to sell its products to the public. The Company, however, carries on a valuable educational advertising campaign for the public with the central theme, "See Your Doctor."

Five County Military Sanitation Zone Established.—The Wharton-Jackson County Medical Society at a recent meeting approved the formation of a military sanitation zone to cover the counties of Wharton, Matagorda, Victoria, Jackson and Cal-

houn, informs the *El Campo Citizen*. The purpose of the zone is to bring about the formation of five venereal disease clinics in Bay City, Palacios, Victoria, El Campo, and Port Lavaca. The zone will be served by a health unit, which will receive $30,000 in funds, $20,000 of which amount from the State Health Department, the remaining $10,000 to be furnished by the five counties named.

Coördinating Council of Physicians and Social Workers Formed at Dallas.—In order that charitable hospitals and clinics may properly classify and standardize indigent cases, a coördinating council of physicians and social workers was recently formed in Dallas to accomplish this purpose. The council will be served principally by two committees: one to study current economic trends, and the other admissions. Each institution has its own committee on admissions who study each month all borderline cases and those requiring such consideration. The Dallas County Medical Society appoints one staff physician for each institution, who is unknown to the admitting office and who confers with the local admission board periodically.—*Dallas Times-Herald.*

American Social Hygiene Association has recently released a new leaflet, "So Long Boys," about syphilis and gonorrhea, designed for the information of young men about to enter the Army and Navy. The leaflet, written by Dr. Walter Clarke, executive director of the American Social Hygiene Association, will give the boy about to join up the essential facts about syphilis and gonorrhea, and the prevention of these diseases.

Publication and free distribution of "So Long Boys" is one of a number of projects planned by the Association, in coöperation with the Army, Navy, Public Health Service and other government and voluntary agencies, as part of the national defense program to protect military and industrial personnel from health and morale destroying diseases—syphilis and gonorrhea. Social Hygiene Societies, health departments, church and civic groups, are urged to see that every young man has a copy of this leaflet before he leaves for service. Additional copies may be secured, without charge, from the American Social Hygiene Association, 1790 Broadway, New York.

American Board of Obstetrics and Gynecology Examinations.—The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted at Cleveland, Ohio, by the entire Board, from May 28 to June 2, 1941, inclusive, prior to the opening of the annual meeting of the American Medical Association in Cleveland.

Application for admission to Group A, Part II, examinations must be on file in the Secretary's Office not later than March 1, 1941. Candidates for reexamination in Part II must make written application to the Secretary's Office before April 15, 1941. Formal notice of the time and place of these examinations will be sent each candidate several weeks in advance of the examination dates.

All prospective candidates who plan to submit applications in the near future are requested to use the new application form which has this year been inaugurated by the Board. Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania, will be glad to furnish these forms upon request, together with information regarding Board requirements.

The American Association for the Study of Goiter again offers the Van Meter Prize Award of $300 and two honorable mentions for the best essays submitted concerning original work on the problems related to the thyroid gland. The award will be made at the annual meeting of the Association, which will be held in Boston, Massachusetts, May 26, 27 and 28, providing essays of sufficient merit are presented in competition.

The essay may cover either clinical or research investigations; should not exceed 3,000 words in length; must be presented in English, and a typewritten, double-spaced copy sent to the Corresponding Secretary, Dr. W. Blair Mosser, 133 Biddle Street, Kane, Pennsylvania, not later than April 1.

A place will be reserved on the program of the annual meeting of the American Association for the Study of Goiter, for the presentation of the prize winning essay by the author, if it is possible for him to attend. The essay will be published in the annual Proceedings of the Association, but will not prevent its further publication in any journal selected by the author.

Personals

Dr. Fred Lummis, Houston, was recently appointed chief of staff of the Hermann Hospital in that city, for the third successive year, advises the Houston *Post*.

Dr. T. C. Strickland, Greenville, recently returned from a weeks' postgraduate study in eye, ear, nose and throat in New Orleans, states the Greenville *Herald*.

Dr. Fred N. Felder, Palestine, was reappointed county health officer of Anderson County, advises the Palestine *Press*.

Dr. Bruce Hay, Dallas, has been appointed assistant medical officer of the city's venereal disease clinic at Parkland Hospital, succeeding *Dr. T. L. Shields*, who resigned to take an internship.—*Dallas Journal*.

Dr. T. J. Pennington, Nacogdoches, was named county health officer of Nacogdoches for a two-year term, advises the Nacogdoches *Sentinel*.

Dr. Sam Ellis and *Dr. E. J. Arendt*, San Antonio, have been appointed part-time physicians in the city health department to replace *Dr. Ralph C. Letter*, full time physician now on duty with the U. S. Army.—*San Antonio Light*.

Dr. David M. Davis, professor of Urology, Jefferson Medical School, Philadelphia, and a former president of the Southwestern Medical Association, when residing at Phoenix, Arizona, was recently complimented with a luncheon by the El Paso County Medical Society while visiting as a guest in the home of Dr. and Mrs. J. Mott Rawlings.—*El Paso Herald-Post*.

Dr. George Morris Piersol, professor of medicine and vice dean of the Medical Graduate School of the University of Pennsylvania, delivered a lecture, December 5, in the outpatient amphitheater of the University of Texas School of Medicine.

Dr. Harvey B. Stone, associate professor of surgery, Johns Hopkins University School of Medicine, Baltimore, delivered a lecture December 5, to members of the faculty, Galveston physicians and medical students.

Drs. Piersol and Stone were guest speakers at the recent Postgraduate Medical Assembly of Southwest Texas at Houston.—*Galveston News*.

Mason H. Bigelow, an attorney of New York City and a member of the board of directors and executive committee of the National Society for the Prevention of Blindness for the past six years, was recently elected president of that organization by its board of directors. The National Society for the Prevention of Blindness has approximately 17,500 members and donors throughout the United States. Its headquarters are at 1790 Broadway, New York City.

Marriages

Dr. L. N. Pittman of White Deer, to Miss Crystal Loughead of Atlanta, Missouri, in Amarillo, December 23, 1940.

Dr. William C. Basom formerly of Dallas, to Miss

Maurine Elaine Nicholson, both now of St. Paul, Minnesota, November 16, 1940.

Births

To Dr. and Mrs. C. E. Pointon, Port Arthur, a daughter, December 5, 1940.

To Dr. and Mrs. J. J. Fertitta, Beaumont, a daughter, December 26, 1940.

To Dr. and Mrs. Rogers Pierson, Beaumont, a daughter, January 1, 1941.

To Dr. and Mrs. R. L. Rhea, San Antonio, a daughter, Margaret Ellen, January 6, 1941.

To Dr. and Mrs. C. O. Patterson, Dallas, a daughter, Patricia, January 4, 1941.

To Dr. and Mrs. Sam Shelburne, Dallas, a daughter, Alice Lee, January 14, 1941.

SOCIETY NEWS

Austin-Waller Counties Society

December 17, 1940

(Reported by O. E. Steck, Secretary)

Austin-Waller Counties Society members and their wives were the dinner guests of Dr. and Mrs. Herbert E. Roensch at their home in Bellville, December 17, 1940. Eighteen guests were present.

New Officers.—All officers were re-elected and committeemen reappointed, as follows: President, Malcolm A. Jones, Hempsted; vice-president, Winston S. Thiltgen, Bellville; secretary-treasurer, Otto E. Steck, Bellville; delegate, Herbert E. Roensch, Bellville; alternate delegate, Malcolm A. Jones, Hempsted; committee on public health and legislation, F. W. Hover, Sealy, and J. A. Neely and O. A. Trenckmann, Bellville; committee on tuberculosis, Virgil Gordon, W. T. Brown and H. E. Roensch, and committee on military affairs, H. E. Roensch, O. E. Steck and Sidney C. Walker.

The next meeting of the Society will be held in Hempsted, February 18, 1941.

The secretary was instructed to write Joe Kopecky, San Antonio, inviting him to present a paper on pneumonia control at the February meeting.

Big Bend Counties Society

January 14, 1941

(Reported by Joel Wright, Secretary)

Collapse Therapy in Pulmonary Tuberculosis—Captain J. N. Salyer, Post Hospital, Fort Russel.

Suppurative Appendicitis and Use of Wangensteen Suction in Postoperative Treatment—Malone V. Hill, Alpine.

Use of the Bronchoscope and Esophagoscope—W. E. Vandevere, El Paso.

Big Bend Counties Medical Society held a joint dinner meeting with Big Bend Counties Auxiliary at the Holland Hotel, Alpine, as the guests of the Alpine members of the Society.

After dinner the Society held a separate meeting, and the scientific program as given above was carried out. The paper of Captain Salyer was discussed by J. C. Darracott, W. E. Lockhart and F. E. Gibbons. The paper of Dr. Hill was discussed by M. E. Barrett, L. A. Lavanture and Colonel Blackwell.

Bexar County Society

November 7, 1940

Indications and Contraindications of Anesthetic Agents and Methods—Wilber F. Robertson, San Antonio.

Anesthesia and Gas Therapy—George H. Paschal, San Antonio.

Advantages of Intratracheal Anesthesia—R. A. Miller, San Antonio.

Bexar County Medical Society met November 7, in the Medical Library Building, San Antonio, with fifty-one members and six visitors present. Herbert Hill, president, presided, and Elmer T. Coats, chairman of the scientific program, presented the program as given above.

Indications and Contraindications of Anesthetic Agents and Methods (Wilber F. Robertson).—Factors which may influence the choice of anesthetics include such considerations as (1) the type of operation contemplated; (2) the general condition, age, state of heart, and preference of patient; (3) preference of surgeon, and (4) the degree of skill of the anesthetist. Various anesthetics were named, and their purposes and uses briefly described.

Ether is indicated where a deep anesthetic is desired, where the open or vapor method is to be employed and in the very young. Contraindications to the use of ether as an anesthetic are: (1) respiratory infection, (2) dyspnea, (3) kidney and liver damage, (4) diabetes, (5) heart disease, and (6) where the cautery is to be employed.

Nitrous oxide is indicated in cases in which little muscular relaxation is necessary, and for minor procedures requiring the use of the cautery.

Nitrous oxide is contraindicated (1) in the cases of the very young and the very old, (2) in cases of deep infection and tumors of neck, and (3) in advanced heart disease.

Ethylene has broader indications than nitrous oxide, but its use is contraindicated in the presence of a flame or spark as from a cautery.

Cyclopropane is given with a high concentration of oxygen and does not damage parenchymatous organs. It is indicated (1) for any good risk patient; (2) in the presence of shock; (3) in cases of anemia and blood dyscrasias, heart disease, hyperthyroidism, respiratory obstruction, kidney and liver damage, and (4) in chest surgery.

Cyclopropane is contraindicated in cases in which adrenalin is used; where the cautery or high frequency are employed; in the presence of extreme hypertension (in regard to which there is some disagreement), and in cases in which there are irritability of the heart muscle and ectopic beats as in toxic goitre. Dr. Lahey does not use cyclopropane in cases of toxic goitre but other surgeons do.

Pentothal sodium and evipal may be considered together, as there is no choice between these two anesthetic agents. They are indicated in induction anesthesia, to precede or supplement local anesthesia, or to precede or supplement spinal anesthesia. They are contraindicated: (1) in patients under the age of 10 and in the very aged; (2) in cases of advanced heart disease; (3) cases of marked kidney and liver damage; (4) cases in which respiratory obstruction, anemia, shock, or hypertension are present, unless oxygen is given with them; and (5) in cases in which sulfanilamide has been given.

Avertin is useful (1) in any case in which it is desirable to bring the patient or child to the operating room asleep; (2) to lessen the need for additional anesthetic agents, and (3) as a preliminary to local anesthesia.

Avertin is contraindicated: (1) in the presence of lesions of the lower bowel; (2) in cases of severe liver and kidney damage, cirrhosis and jaundice; (3) cachexia, and (4) respiratory depression.

Regional anesthesia is indicated in the cases of bad risk patients and in cases where the tendons are to be repaired. It is contraindicated in cases of malignant tumors, sepsis, local inflammatory diseases, obesity, hysteria, and in the young.

Spinal anesthesia is not the optimum choice in bad risk patients. It is indicated: (1) in surgery below the diaphragm; (2) in cases of diabetes, kidney and liver damage, and in pulmonary tuberculosis.

Spinal anesthesia is contraindicated: (1) in the presence of cardiac decompensation, debility, toxicity,

anemia, hypotension, hypertension, dehydration, abdominal distension, and acute alcoholism; (2) for cesarean section, and (3) for surgical treatment of intestinal obstruction, although some surgeons consider it the best anesthetic for the last named condition.

ANESTHESIA AND GAS THERAPY (George H. Paschal).—Carbon dioxide inhalation given after operations prevents pulmonary atalectasis.

Five per cent carbon dioxide with 95 per cent oxygen may help in cases of overdoses of morphine, drowning or electric shock. Carbon dioxide has been used in shock therapy, such as the shock therapy with metrazol. It should be remembered that when cyclopropane is used in obstetrics, newborn babies have as much cyclopropane in their blood as do the mothers so that the cords should not be cut too soon after delivery; instead 10 per cent carbon dioxide should be given to the mother.

Helium is now cheap and usable and is valuable in cases of asthma. This gas has been used in the treatment of postoperative atalectasis and also in unresolved pneumonia.

Oxygen is given in concentrations of from 40 to 60 per cent atmospheric, but it must be administered with comfort to the patient. It is used early in pneumonia and coronary patients are benefited by oxygen. It is of value in the anemic type of anoxemia, the stagnant type of anoxemia (circulatory failure), in headaches caused by spinal puncture or encephalography, in shock, diabetes, and in migraine and allergic headaches. One treatment is given each day for thirty minutes for three days and the series repeated in one week.

ADVANTAGES OF INTRATRACHEAL ANESTHESIA (R. A. Miller).—The following are the principal reasons for the use of intratracheal anesthesia: (1) occasionally the vocal cords become closed and spastic and oxygen cannot be forced past them; on other occasions the vocal cords may be relaxed but closed; (2) the method helps get the anesthetist away from the patient; (3) the anesthetist has complete control of the anesthesia.

The technique of administration of intratracheal anesthesia is as follows: Premedication the night before and the morning before is excellent and must be given at the proper time. The intubation is best done during the apnea over deep anesthesia and plenty of oxygen is then given. The tube is passed through the nasal passages by the sense of touch; this procedure is successful in 35 per cent of cases. With the direct method, there is a direct view through the laryngoscope. A tooth protector is used.

Intratracheal anesthesia is helpful in chest surgery; upper abdominal surgery (laryngospasm may occur and the diaphragm should not move and interfere with the surgeon), in mastoidectomy and tonsillectomy. This type of anesthesia is contraindicated in cases of acute upper respiratory infection; tuberculosis, cancer or inflammation of the larynx, and in thyroidectomy. The disadvantages of this type of anesthesia are: (1) the technique may be very troublesome or even impossible, it being very hard to pass the tube in short-necked persons; and (2) nasal hemorrhage may occur. It may be useful in drowning, electric shock and similar conditions.

R. A. Miller, in discussing the papers on anesthesia, stated that cyclopropane is probably not a cardiac irritant.

Frederic W. Steinberg asserted that an electrocardiogram is valuable in some cases to show myocardial damage.

Melbourne J. Cooper stated that minor neuroses, psychoses and depressive states are treated by carbon dioxide. Tetanic spasms are produced, inhibitions are lost, and for five to ten minutes the patient tells all. Tension is relaxed. For from four to eight treatments may be needed. The treatment is not for schizophrenics.

J. W. Nixon stated that to anesthetists belongs the credit for advances in chest surgery. Some good chest surgeons use ether for their patients. Spinal anesthesia is better than any other kind of anesthetic in cases of intestinal obstruction. Lantern slides were shown.

Major Sam F. Seeley also expressed the opinion that spinal anesthesia is best for intestinal obstruction unless shock is present.

O. J. Potthast pointed out that Dr. A. O. Singleton of Galveston, was using intratracheal anesthesia when Dr. Potthast was a student there.

C. S. Venable stated that avertin does not stimulate or inhibit peristalsis, and that cyclopropane added has the same effect.

New Member.—Asher Richardson McComb was elected to membership on application.

A communication from A. F. Clark, chairman of the membership committee, was read stating that, at the request of President Hill, the committee had given consideration to granting leave of absence and remission of dues by Bexar County Medical Society to its members while on active military duty during 1941, and that the committee recommended that such members as receive this courtesy shall pay their pro rata of state dues provided the State Medical Association does not see fit to make the remission. After amendment of the recommendation to read, "that the dues be remitted on a pro rata basis," it carried.

President Hill appointed the following committee on blood donors: David A. Todd, R. E. Scott, J. M. Moore, and Ellen Furey.

Physicians who wish to volunteer for service on draft boards were urged to contact Dudley Jackson.

Resolutions of condolence were adopted on the death of the wife of Dr. Bernard H. Bloom of San Antonio.

November 14, 1940

(Reported by R. H. Crockett, Secretary pro tem)

Early Tuberculosis—Henry R. Hoskins, San Antonio.
X-Ray Aid in the Treatment of Postoperative Parotitis Erysipelas and Gas Gangrene—Roy G. Giles, San Antonio.

Bexar County Medical Society met November 14, in the Medical Library Building, San Antonio, with thirty-five members and three visitors present. Robert E. Parrish, vice-president, presided and G. G. Passmore, section chairman for the evening, presented the scientific program as given above.

EARLY TUBERCULOSIS (Henry R. Hoskins).—The term early tuberculosis should be used to define a small advance of infection and not the lesion produced in the first tuberculosis infection. Most early tuberculous infections get well and some years later a second attack occurs following which they may seem cured and a third attack occurs which causes the patient to consult a physician. All x-ray evidence of active tuberculosis may clear up and the sputum still be positive. After the sputum has been positive a long period of time the x-ray findings may still be negative. A person may have active tuberculosis and be symptom-free from twelve to eighteen months or much longer. Symptoms are either toxic or mechanical or both. When the bronchoscope is used to obtain sputum and guinea pig inoculation is done, positive diagnoses are possible in 90 per cent of cases, while if only the sputum raised by the patient is examined, positive early diagnoses may be made in only 10 per cent of cases and many roentgenograms will be found negative for tuberculosis.

C. J. Koerth, superintendent of the Woodmen of the World Hospital, San Antonio, in discussing the paper, stated that in tuberculosis sanatoria through-

out the country, there are too many cases of moderately advanced and far advanced tuberculosis. About 75 per cent of patients in tuberculosis institutions have advanced tuberculosis. Dr. Hoskins has timely and clearly demonstrated the importance of early diagnosis in early tuberculosis. The early diagnosis of tuberculosis is not a simple but a complex problem. The responsibility of the physician in making an early diagnosis is very great; he should be extremely cautious in deciding the patient does not have tuberculosis when the patient feels sick and has chest symptoms despite the fact that his x-ray, physical and laboratory findings may be negative. Observation, time and careful study are paramount factors in the diagnosis of early tuberculosis. Too often when diagnosis of early clinical tuberculosis is made the patient is in reality in an advanced stage of the disease. The diagnosis of early tuberculosis is based upon a carefully taken history; x-ray study; laboratory investigations of the sputum, with an ordinary smear, concentrated smear, and guinea pig test; the use of the sedimentation and tuberculin tests; a careful physical examination and the necessary element of time for proper observation and evaluation of all findings. Dr. Koerth stated his belief that the x-ray will give more definite, concrete evidence than any other method of investigation, and that no physician should ever make a diagnosis for or against pulmonary tuberculosis unless he had made at least a roentgenogram of the lungs. It should be remembered that in order to cause a shadow on the roentgenogram the lesion has to be of a certain size, and oftentimes the diagnosis will not be made between early tuberculous infection and early clinical tuberculosis because of the smallness of the lesion.

Surgery has come to the front in the treatment of tuberculosis but it is used almost altogether in the moderately advanced and far advanced cases and it is an indictment of the medical profession when surgery becomes necessary for the treatment of pulmonary tuberculosis, since it indicates that a delayed diagnosis was made. If cases were found early as they should be, surgery would not be used except in about 10 per cent of cases. Records at the Woodmen of the World Hospital, San Antonio, reveal that 91 per cent of patients received with early tuberculosis are living after the seventeen years operation of that institution, which record is duplicated in other tuberculosis sanatoria, and, in itself, is the strongest argument for early diagnosis.

Roy G. Giles, in his paper on X-ray Aid in the Treatment of Postoperative Parotitis Erysipelas and Gas Gangrene, recommended that x-ray radiation be given early in cases of gas gangrene, three exposures in twenty-four hours with from 150 to 100 *r* at each exposure. The radiation is repeated on the second day with a lesser amount on the third day as symptoms and skin tolerance indicate. All helpful methods in the treatment of gas gangrene should be used with the x-radiation. X-radiation should be used even in late cases of gas gangrene.

J. T. Goetz reported a case of gas gangrene which had been treated with x-ray by Dr. Giles. The paper was further discussed by R. H. Crockett and C. Ferd Lehmann.

December 19, 1940

(Reported by W. W. Bondurant, Jr., Secretary)

Bexar County Medical Society held its annual meeting and election of officers, December 19, in the Medical Library Building, San Antonio, with seventy members present. Herbert Hill, president, presided.

The Society voted that a letter of thanks be sent to Colonel Darby of Fort Sam Houston Station Hospital for the interesting meeting held at that institution on December 12.

A committee from the dental society was heard with regard to the coöperation of the Society in the protection of members and dentists as far as office space is concerned, who leave for army service.

R. E. Parrish moved that the president appoint a committee of physicians from the Medical Arts and Nix Professional buildings to confer with the building managers with regard to maintaining present space at nominal rental or to store equipment, and to coöperate with the dental committee. Melbourne J. Cooper advised that any agreement made might not be binding on the individual member. The motion carried.

C. B. Alexander presented a Christmas check from the Society to Mrs. Brin.

A collection box was passed for the porter, and the sum of $15.00 collected for his Christmas present.

W. W. Bondurant, Jr., gave the annual report of the secretary for 1940, which showed a paid-up membership of 296, including honorary members. Ten junior, one senior and three intern members were received during 1940. The Society has two Emeritus members, Drs. Alfred C. McDaniel and J. M. Doss. Four new members were received by transfer. Three members died during 1940. Nineteen new members have been received for 1941 as follows: Thirteen junior, one senior, and five intern members. Twenty-nine regular meetings were held in 1940.

C. B. Alexander gave the report of the treasurer, which revealed total receipts, including $1,291.41 balance from the previous year, $11,125.36. Total disbursements were $9,716.09, leaving a balance of $1,409.27.

The legislation and public health committee composed of Conn L. Milburn, chairman; J. A. McIntosh, and E. V. DePew, reported that three meetings were held with the San Antonio board of health concerning the public health policy of San Antonio, and that committee members had offered to attend any meeting of the Board of Health at any time that they were invited to do so. A careful study was made by the committee of the offer of the Federal Government through the State Board of Health to provide serums and chemotherapeutic remedies for the treatment of pneumonia. The committee met with Dr. Joseph Kopecky, chairman of the Pneumonia Control Committee of the State Medical Association, a representative from the State Board of Health and a subcommittee appointed by the president for the purpose. It was decided to accept the offer and it was agreed that all cases should be treated at the Robert B. Green Hospital. Upon the recommendation of the committee the offer was accepted and the plan endorsed by the Bexar County Society.

A plan for the organization and conduct of free children's clinics was presented to the committee by the city health officer, and this matter was referred to a subcommittee of pediatricians appointed by the president. This work was carried out in a satisfactory manner. The committee gave full consideration to the venereal disease program of the State Health Department in Texas and recommended that the president appoint a committee of three to contact the Senator and Representatives from Bexar County in order to fully familiarize them with the venereal disease control program in Texas.

The program committee, composed of Walter G. Stuck, Lloyd I. Ross and Lee Rice, chairman, expressed its appreciation for the assistance rendered the committee by many members of the Society in the execution of various scientific programs throughout the year and pointed out that not a single essayist had failed to appear on the program as announced.

M. J. Cooper, chairman, gave the report of the library committee, which, acting in an advisory capacity, had made recommendations for purchases of books during the year, principally newly published volumes. Numerous interviews with representatives of publishing houses had been held. No essential changes in the lists of current periodicals received in the library were recommended.

A. F. Clark, chairman, gave the report of the membership committee in detail. The committee recommends to the next membership committee to caution individual members of the Society who now or in the future anticipate leaving for active military duty, to avoid being dropped for non-payment of dues, which can be obviated by application for leave of absence as provided in the by-laws.

The committee on tuberculosis, composed of C. J. Koerth, R. G. McCorkle and James L. Anderson, reported that the committee had advised and coöperated with the Alamo Council on Tuberculosis, the Bexar County Tuberculosis Association, and the Junior Chamber of Commerce, in carrying out an educational campaign in San Antonio and Bexar County on tuberculosis. Through the work of these organizations, a special bond election resulted in the voting of bonds, which will make possible the construction of a tuberculosis hospital with a capacity of 220 beds, which, it is hoped, will relieve to a degree the hospital bed need in Bexar County. Two part-time physicians have been appointed by the commissioner's court to the staff of the county health officer to aid in tuberculosis work in San Antonio and Bexar County. The following steps are still necessary to carry out the four point plan for the control of tuberculosis adopted by the Society on May 18, 1939: (1) The securing of adequate space and facilities for a tuberculosis clinic at the Robert B. Green Hospital, adequately staffed for the diagnosis of tuberculosis and for pneumothorax treatments; this department or clinic to be under the control of the staff and board of managers of the Robert B. Green Hospital. (2) That ample beds and facilities be provided at the Robert B. Green Hospital for the active surgical treatment of pulmonary tuberculosis. (3) That a tuberculosis service be developed by the staff of the Robert B. Green Hospital, consisting of a medical division with a chief of service and a surgical division with chief of service to be of a rotating character and to be approved by the staff of the hospital.

President Hill stated that the reports of the officers and committees could be considered by the Society as the president's address; that whatever progress had been made by the Society had been the result of the excellent work and coöperation of the various committees, for which he wished to express his grateful appreciation. He thanked the Society for the high honor conferred upon him in his election to the office of president. He referred to the changing economy that may be expected following a world upheaval. He expressed belief that the medical profession should initiate a change rather than allow the government or commercial organizations to start it; that he had reference to health insurance, similar to hospitalization insurance as promoted by hospitals. He recommended that a committee be appointed to study this matter.

Election of Officers.—The following officers were elected to serve for 1941: President, Frank N. Haggard; vice-president, E. M. Sykes; secretary, W. W. Bondurant, Jr. (re-elected); treasurer, C. B. Alexander (re-elected); new member, board of censors, J. Manning Venable; delegates, Herbert Hill, L. B. Jackson and J. R. Nicholson, and alternate delegates, Lee Rice, Robert E. Parrish and David A. Todd.

After the election, members adjourned to the dining room where refreshments were served and a good time was had by all.

Brooks-Duval-Jim Wells Counties Society

December 18, 1940

(Reported by Thelma E. Frank, Secretary)

Brooks-Duval-Jim Wells Counties Medical Society met December 18, 1940, at the Alice Hotel, Alice, Texas. The following officers were elected for the ensuing year: President, J. H. Thomas, Freer; vice-president, M. H. Appel, Alice; secretary-treasurer, Thelma E. Frank, Benavides; new member, board of censors, N. W. Atkinson, Alice; delegate, G. G. Wyche, Alice, and alternate delegate, J. A. Moet, Orange Grove.

Jim Wells County members of the Society voted to adopt the tuberculosis program as sponsored by the State Health Department.

January 15, 1941

Diagnostic Problems Encountered in General Practice:
Intestinal Obstruction (motion picture)—C. Sory, Freer.
Ruptured Tubal Pregnancy from Old Salpingectomy Stump—J. H. Thomas, Freer.
Uterine Fibroids Confused with Pregnancy—R. G. Spann, Freer.

Brooks-Duval-Jim Wells Counties Medical Society met January 15, at the Alice Hotel, Alice, Texas, with twelve members present. The scientific program as given above was carried out, followed by a general discussion by those present.

Caldwell County Society

January 10, 1941

(Reported by J. T. O'Banion, Secretary)

New Officers.—At a meeting of the Caldwell County Medical Society held in Lockhart, Texas, January 10, 1941, the following officers were elected for the ensuing year: President, M. W. Pitts; vice-president, Pruett Watkins; secretary-treasurer, J. T. O'Banion; members, board of censors—F. C. Luckett, E. A. Benhow and O. K. DuBoise; delegate, A. A. Ross, Sr., and alternate delegate, Edgar Smith.

Cherokee County Society

December 17, 1940

(Reported by Elmer Haynes)

The Surgical Treatment of Pulmonary Tuberculosis—J. Emerson Daily, Houston.

Cherokee County Medical Society met December 17, 1940, in Deckard's Cafe, Rusk, Texas, and the scientific program as given above was carried out.

The paper of Dr. Daily was discussed by W. H. Sory and J. M. Travis, Jacksonville, and H. P. Thomas, Rusk.

New Officers.—The following officers were elected for 1941: President, M. S. Wheeler, Rusk; vice-president, W. A. McDonald, Alto; secretary-treasurer, T. H. Cobble, Rusk (re-elected), and delegate, J. M. Travis, Jacksonville (re-elected).

Dallas County Society

November 14, 1940

(Reported by W. W. Fowler, Secretary)

The Use of Concentrated Plasma in Surgical Shock: Two Case Reports—Dale J. Austin, Dallas.
Laboratory Diagnosis and Treatment of Pneumococcic Meningitis—Ernestine Smith, Dallas.
The Treatment of Pneumonia in Children—E. F. Meredith, Dallas.

Dallas County Medical Society met November 14, 1940, in the Medical Arts Auditorium, Dallas, with fifty-six members present. Charles L. Martin was elected president *pro tem* in the absence of both the president and vice-president and presided over the meeting. The scientific program as given above was carried out.

The paper of Dr. Austin was discussed by Frank

Selecman, R. B. McBride, John R. Worley and Charles L. Martin.

The presentation of Dr. Smith was discussed by E. M. Perry, and the paper of Dr. Meredith was discussed by B. J. Berger.

Other Proceedings.—John G. Young, chairman of the economic relations committee gave the report of that committee on the David Graham Hall Foundation of Dallas. In action on the matter of whether and under what conditions the medical profession of Dallas could best coöperate with the "Hall Foundation" proposed for the control of syphilis, the committee advanced the opinion that such money as may be available would more economically and certainly serve the public better, if the founder or founders would aid work already under way in the prevention and treatment of syphilis such as the venereal department at Parkland Hospital for the permanent use under the direction of city-county authorities, where equipment and capable operation exists under efficient control. By such procedure a great saving could be accomplished both in buildings, equipment and needless salaries and other overhead, and more funds left available for prevention and treatment. This procedure would also secure the needed and necessary professional coöperation.

New Member.—John S. Bagwell was elected to membership on transfer from the Olmsted-Houston-Fillmore-Dodge Counties Medical Society of Rochester, Minnesota.

December 12, 1940

Dallas County Medical Society held its annual business meeting and election of officers December 12, in the Medical Arts Auditorium, Dallas, with seventy-five members present. Curtice Rosser, president, presided.

John G. Young, reporting for the economic relations committee, gave an outline of the Murray Bill now pending in the United States Senate. The bill provides that physicians drafted into military service may be taken in as officers of the medical reserve corps and permits interns to finish their internships before being drafted into service as officers of the medical reserve corps. The bill if enacted into law will be effective only during the present emergency and not effective should war be declared. Dr. Young moved that the Society go on record as favoring the Murray Bill, and that Senator Morris Sheppard, chairman of the committee considering this bill, be so notified. The motion was amended by C. M. Rosser to the effect that Senator Tom Connally also be notified of the action of the Society. The amendment was accepted by Dr. Young, and the motion as amended was carried.

Jo C. Alexander, chairman, gave the report of the public health and legislation committee. The committee soon after its appointment gave a clinical test and approved the drunk-o-meter as used by the Dallas police department. The advisory committee to the health department and the public health and legislative committee had held two meetings for the purpose of bringing the Society and city health department into closer coöperation. A free and informal discussion of differences that had arisen between the local profession of Dallas and the health department was had. No further meetings were held. The committee expressed the belief that publicity apparently originating in the city health department regarding syphilis is unwarranted and at times not supported by the statistics of scientific medicine; that such publicity is not only detrimental to the public health of the community but it is unfair to the business concerns and professional men of Dallas in that many persons are afraid to come to Dallas because they have been led to believe that the majority of the public of Dallas is syphilitic and that they would be running a risk of contracting this disease.

A. I. Folsom moved that a copy of the report of the public health and legislative committee be sent to the mayor of Dallas and the president of the Dallas Chamber of Commerce in an effort to stop unfavorable newspaper publicity on syphilis. Following extended discussion the motion was lost.

Douglas M. Bush, chairman, gave the report of the program committee. The committee expressed the opinion that arranged discussions do not attract as much as programs with more topics and fewer discussions, and, therefore, the committee suggested that discussion be discontinued except in specific instances. The committee had found it impossible to present well arranged programs in the spring when papers to be read at the State Medical Association meeting clutter up the programs of the Society. The committee would strongly recommend to the executive council that State Medical Association papers not be presented on the programs of the county medical society except at the discretion of the committee. The committee further recommended that an annual dinner be held by the Society with members of the Tarrant County Medical Society as paying guests; that the program for the meeting be one of particular interest, with guest speakers, and that the meeting be held on the second Tuesday in January or the first meeting of the year.

Dr. Bush moved that the recommendations of the program committee providing for an annual dinner to be held with members of the Tarrant County Medical Society as paying guests be adopted, which motion carried.

C. M. Rosser moved that physicians in counties bordering on Dallas also be invited to attend this meeting and dinner. The motion carried.

M. Hill Metz, chairman, gave the report of the exhibit committee. An exhibit entitled, "Self Diagnosis and Self Medication," assembled by the American Medical Association in Chicago, was displayed in the educational building at the Texas State Fair in October, 1940, under the sponsorship of the Society and with the aid of the Auxiliary to the Society. Fair attendants reported more interest in this exhibit than any other at the Fair. Members of the Auxiliary estimated that they spent approximately fifty hours in attendance on the exhibit, and that 5,000 copies of the pamphlet, "Priceless Heritage," were given to the public during a period of two weeks. The committee recommended that a similar health educational exhibit be presented during the next Fair season.

A. I. Folsom, chairman, gave the report of the military affairs committee and named the physician members of draft boards 20 and 21 in Dallas.

H. Leslie Moore, chairman, gave the report of the public relations committee.

R. A. Trumbull, chairman, gave the report of the grievance committee, advising that no grievances had come before the committee during the year.

The secretary's annual report showed an average attendance of seventy members, forty-nine scientific papers read during the year and 510 members in good standing.

The treasurer's annual report showed a balance of $573.78 in the checking account; $1,517.67 in the savings account, and $223.47 in the entertainment fund, the total being $2,314.92.

Kelly Cox, chairman, gave the report of the auditing committee, the other members of the committee being Hall Shannon and H. Frank Carman. The committee recommended that the separate entertainment fund established during the past year be continued to be kept in a different bank and that all checks on the entertainment fund be signed not only by the secretary and treasurer of the Society

but countersigned by the president. The committee further recommended that local dues of all members of the Society called to active military service be remitted during that term of service.

George Carlisle reported for the committee on aid to Britain, that a quantity of used instruments had been collected and forwarded to the National Committee in New York.

New Members.—The following new members were introduced by President Rosser: Asa E. Seeds, E. Stephen Stanley and John S. Bagwell.

The following physicians were elected to membership on application: J. E. Robertson, Elizabeth Williams, George J. Stuart and A. J. Gill.

The Society instructed the secretary to pay $30 dues for 1941 in the Better Business Bureau.

New Officers.—Officers for the ensuing year were elected as follows: President, Homer Donald; vice-president, J. N. McLeod; secretary-treasurer, W. W. Fowler (re-elected); delegates, C. R. Hannah*, Hall Shannon, H. Leslie Moore; alternate delegates, Edward White, B. Rubenstein and Everett C. Fox; new member, board of censors, Kelly Cox.

Dawson-Lynn-Terry-Gaines-Yoakum Counties Society

December 11, 1940

(Reported by Emil Prohl, Secretary)

New Officers.—Dawson-Lynn-Terry-Gaines-Yoakum Counties Medical Society met December 11. The following officers were elected for the ensuing year: President, L. D. Richards, Seminole; vice-president, Emil Prohl, Tahoka; secretary-treasurer, Wayne C. Hill, Tahoka; delegate, John R. Turner, Brownfield, and alternate delegate, N. H. Price, Lamesa.

New Member.—Wayne C. Hill, Tahoka, was elected to membership.

Gray-Wheeler Counties Society

December 17, 1940

(Reported by Clifton High, President)

Value and Uses of the Electrocardiograph in the Diagnosis of Heart Disease—Oliver Gooch, Shamrock.
New Methods in the Treatment of Lobar Pneumonia—A. W. Terrell, Dallas.

Gray-Wheeler Counties Medical Society met December 17, 1940, at the Schneider Hotel, Pampa, and the scientific program as given above was carried out. Dr. Terrell, in discussing new methods of treatment of lobar pneumonia, emphasized the value and indications for oxygen, typing, serum and chemotherapy.

New Officers.—The following officers were elected for 1941: President, Clifton High, Pampa; vice-president for Gray County, R. Malcolm Brown, Pampa; vice-president for Wheeler County, J. W. Gooch, Shamrock; secretary, G. R. Walker, Wheeler (re-elected), and delegate, H. E. Nicholson, Wheeler.

Hardeman-Cottle-Motley-Foard Counties Society

December 19, 1940

(Reported by J. J. Hanna, Secretary)

Buerger's Disease—A. C. Rogers, Vernon.
Vitamin B Complex in Diseases of the Eye—B. W. Miller, Vernon.

Hardeman-Cottle-Motley-Foard Counties Medical Society met December 19, and the scientific program as given above was carried out.

New Officers.—The following officers were elected for 1941: President, J. J. Hanna, Quanah; vice-president, T. D. Frizzell, Quanah; secretary-treasurer, A. C. Hughes, Roaring Springs, and delegate, A. C. Traweek, Sr., Matador.

Harris County Society

November 27, 1940

(Reported by Hugh C. Welsh, Secretary)

Harris County Medical Society held a regular business meeting November 27, with sixty-two members present.

P. R. Stalnaker gave the report of the committee on military affairs.

W. M. Brumby asked for members to volunteer their services on draft boards.

F. R. Lummis gave the report of the committee on medical economics.

John T. Moore moved that the Society request the medical economics committee to present a definite recommendation at a meeting to be called by the president at the request of the economics committee.

C. C. Cody moved that the Society accept the report of the board of medical economics with the request that, at the annual business meeting, the board present a motion whether the Society accept the principle of the distribution of medical service to groups on the prepayment plan, which motion was seconded by John T. Moore and carried.

Secretary Welsh read the report of the legislative and public health committee.

E. W. Bertner reported verbally for the entertainment committee, Raymond Dawes for the sick and relief committee, and John T. Moore for the historical committee.

E. W. Bertner gave the report of the committee to secure the meeting of the Southern Medical Association, and on motion of R. J. Slataper, the report was adopted.

E. W. Bertner reported verbally for the Ripley Settlement House, Department of Preventive Medicine.

J. T. Billups gave the report of the treasurer, which was approved by the Society.

New Members.—The following new members were introduced to the Society by President Greer: Lewis Barbato, W. P. Bonin, Ralph Bowen, W. F. Cole, D. L. Curb, W. M. Donohue, R. A. Gardner, F. S. Glover, Charles H. Hallson, E. B. Lewis, Jack H. Mayfield, L. A. McRae, S. G. Ohlhausen, D. Y. Oldham, I. D. Peters, K. R. Phelps, E. S. Sears, M. F. Strashun, D. R. Swetland, G. B. Thomas and N. C. Windrow, Jr.

L. J. Taubenhaus was elected to membership on application.

J. T. Billups moved that the Society instruct the treasurer to have the books audited, which motion was seconded by E. L. Goar and carried.

On the request of the city health department for endorsement of its action in employing Dr. M. K. O'Heeron on a temporary basis to replace Dr. H. G. Cull, called to the army for extended service, it being understood that the position will be returned to Dr. Cull on his release from service with the army, the Society unanimously endorsed the action taken. A statement of endorsement of the action had been previously signed by all available urologists, dermatologists and others interested in problems of the city health department, which endorsements were appended to the request presented to the Society.

Hunt-Rockwall-Rains Counties Society

December 4, 1940

(Reported by M. L. Wilbanks, Secretary)

Hunt-Rockwall-Rains Counties Medical Society held its annual meeting and banquet December 4, on which date it was host to the North Texas District Medical Society for a one day scientific session in the Municipal Building, and at a banquet sponsored by the Woman's Auxiliary to the Society at the Washington Hotel, Greenville, in the evening.

Prior to the banquet the following officers were elected for the ensuing year: President, W. M. Dickens; vice-president, E. T. Crim; secretary-treas-

*Deceased, December 16, 1940.

urer, M. L. Wilbanks (re-elected); delegate, J. W. Ward; alternate delegate, W. B. Reeves, and new member, board of censors, J. C. Cheatham.

President Dickens has appointed the following committees: *Legislation and public relations*, E. P. Goode, chaiman, M. L. Wilbanks and O. H. Trimble; *public health and education*, E. R. Hayes, chairman, H. C. Wilson, B. F. Arnold and S. D. Whitten; *military affairs*, Joe Becton, C. T. Kennedy and J. C. Cheatham, and *tuberculosis*, W. P. Philips, chairman, W. B. Reeves, T. C. Strickland, J. Russell Smith, Clarence G. Allen and C. M. Jackson.

Joe Becton, Greenville, was introduced at the banquet as the new president of the North Texas District Medical Society. Dr. Mims Gage, Tulane University, New Orleans, guest speaker of the North Texas District Medical Society, was also presented.

M. L. Wilbanks gave the invocation. The principal speaker was Rev. Wesley V. Hite, pastor of Kavanaugh Methodist Church.

Hutchinson-Carson Counties Society

December 13, 1940

(Reported by M. M. Stephens, Secretary)

Hutchinson-Carson Counties Medical Society held its regular meeting, December 13, 1940, at the North Plains Hospital, Borger.

New Officers.—The following officers were elected for 1941: President, L. M. Draper, Borger; vice-president, L. E. Petty, Borger; secretary, M. M. Stephens, Borger; delegate, L. E. Petty, Borger; alternate delegate, L. M. Draper, Borger; committee on legislation, H. M. Hamra and W. W. Brooks, Phillips, and W. C. Barksdale, Panhandle; board of censors, W. G. Stephens and H. G. Wallace, both of Borger.

Jefferson County Society

December 9, 1940

(Reported by George L. Butler, Secretary)

Jefferson County Medical Society held its annual banquet and election of officers on the Goodhue Hotel Roof, Port Arthur, with seventy-two members present.

W. Price Killingsworth gave the annual financial report of the Society for 1940, which was accepted.

C. M. White moved that annual dues for 1941 remain at $15.00, which motion was seconded by J. W. Long and carried.

J. W. Long moved that the annual banquet be paid for out of the treasury, which motion was seconded by H. E. Alexander and carried.

The incoming secretary was presented with a cashier's check for $329.27 by the outgoing secretary, which sum represented the cash balance of the Society to date.

New Officers.—Officers for 1941 were elected as follows: President, T. A. Fears, Beaumont; vice-president, W. Price Killingsworth, Port Arthur; secretary-treasurer, George L. Butler, Beaumont; members, board of censors—T. B. Matlock, L. C. Powell and J. Bybee; delegates, L. C. Heare, Port Arthur and Talbot A. Tumbleson, Beaumont, and alternate delegates, Paul R. Meyer, Port Arthur, and Ernest Robertson, Beaumont.

January 13, 1941

The Treatment of Pneumonias—W. G. Reddick, Associate Professor of Medicine, Baylor University College of Medicine, Dallas.

Jefferson County Medical Society met January 13, at St. Therese Hospital, Beaumont, with sixty-five members present. T. Alvin Fears, president, presided and the scientific program as given above was carried out.

The interesting, instructive discussion of Dr. Reddick on the treatment of pneumonias was discussed by J. C. Crager, H. B. Eisenstadt, Taylor C. Walker, S. J. Lewis, J. W. Long, W. J. Graber, John N. Gardner, H. B. Williford, E. C. Ferguson and Pierre Robert.

President Fears announced committee appointments for 1941.

J. C. Crager moved that the Society secure permission from the proper authorities to appoint new local examiners for the draft boards, which motion was seconded by W. D. Brown and carried.

W. J. Graber moved that all members of the Society called to active military duty be exempt from local dues and that such members be carried as in good standing during the terms of their military service, as far as the Jefferson County Medical Society is concerned. The motion was seconded by W. P. Killingsworth and carried. The membership status of these members in the State Medical Association will depend upon the action of the House of Delegates of that organization.

H. E. Alexander stated that when special examinations of draftees are required, physicians making such examinations will receive regular fees.

T. C. Walker moved that the Society buy a new lantern projector, which motion was seconded by W. Grady Bevil and carried. T. C. Walker and S. J. Lewis were appointed as a committee to purchase the desired projector.

Liberty-Chambers Counties Society

December 12, 1940

(Reported by E. J. Tucker, Secretary)

Control of Pneumonia—C. T. Stone, Galveston.
Eclampsia (motion picture)—Petrolagar Laboratories, Inc.

Liberty-Chambers Counties Medical Society met December 12, 1940, in the banquet hall of the Methodist Church in Liberty, with E. R. Richter, Dayton, president, presiding. Dinner was served by the ladies of the church, after which the scientific program as given above was carried out.

New Officers.—The following officers were elected for the ensuing year: President, B. L. Jordan, Daisetta; vice-president, W. Legett, Cleveland; secretary-treasurer, E. J. Tucker, Liberty; delegate, A. R. Shearer, Mont Belview; alternate delegate, A. L. Delaney, Liberty, and members, board of censors—Frank S. Griffin, Liberty; J. T. Tadlock, Dayton, and R. C. Bellamy, Daisetta.

Nueces County Society

December 10, 1940

(Reported by C. J. Connor, Secretary)

New Officers.—At a meeting of the Nueces County Medical Society, December 10, in Corpus Christi, the following officers were elected for the ensuing year: President, C. P. Jasperson; vice-president, G. Turner Moller; secretary-treasurer, C. J. Connor; delegate, C. P. Yeager, and alternate delegate, C. F. Crain, all of Corpus Christi.

Palo Pinto-Parker Counties Society

January 6, 1941

(Reported by J. Edward Johnson, Secretary)

New Officers.—At a meeting of the Palo Pinto-Parker Counties Medical Society January 6, the following officers were elected for the ensuing year: President, Leo N. Roan, Weatherford; vice-president, Ben L. McCloud, Graford; secretary-treasurer, J. Edward Johnson, Mineral Wells; member, board of censors, E. M. Russell, Weatherford; delegate, R. H. Smith, Palo Pinto, and alternate, Edward F. Yeager, Mineral Wells.

Tarrant County Society

December 17, 1940

(Reported by Craig Munter, Secretary)

Hospital Insurance in This Locality—Bert C. Ball, Fort Worth.

Summary of Progress—Albert W. Hiller (D. D. S.) Fort Worth.
Credit, The Life of Business (lantern slides)—Retail Merchants Association.

Tarrant County Medical Society met December 17, with forty-three members and four visitors present.

The program given above, arranged by the medical economics committee of the Society for the annual business meeting, was presented. The presentation of Albert W. Hiller was discussed by L. O. Godley, C. P. Schenck and Bert C. Ball.

Other Proceedings.—Secretary Munter read the auditor's report on the general fund of the Society and moved that it be accepted and filed, which motion carried.

Secretary Munter read a letter from S. J. R. Murchison, Chairman of the Committee on Venereal Disease Control of the State Medical Association, suggesting that members of the Society familiarize themselves with venereal disease control measures being carried out in this locality.

R. G. Baker gave a brief eulogy of the late Dr. Calvin R. Hannah of Dallas, a former president of the State Medical Association, and moved that the secretary of the Society be instructed to send a message of sympathy to Mrs. Hannah on the occasion of Dr. Hannah's death. The motion was seconded by R. J. White and carried.

Communications were read from the Taylor-Jones County Medical Society regarding a postgraduate meeting to be held at the Wooten Hotel, Abilene, and from Curtice Rosser, president of the Dallas County Society, inviting members to attend a banquet to be held in Dallas.

President Godley introduced the newly elected officers, who would serve the Society for 1941, as follows: President, R. H. Gough; vice-president, Bert C. Ball, and secretary, W. P. Higgins.

Dr. Gough gave a brief but appropriate expression of appreciation of the honor conferred by the Society in electing him president.

The attendance prize, a clock, was won by R. J. White.

January 7, 1941

(Reported by W. P. Higgins, Secretary)

Symposium on the Diagnosis of the Diseased Heart—
The History—DeWitt Neighbors, Fort Worth.
Physical Findings—Will S. Horn, Fort Worth.
X-Ray Findings—Eugene V. Powell, Fort Worth.
The Electrocardiogram—William L. Howell, Fort Worth.

Tarrant County Medical Society met January 7, with seventy-two members and five visitors present. The scientific program as given above was carried out. The symposium on heart disease was discussed by Sim Hulsey and W. S. Barcus.

Other Proceedings.—Secretary Higgins read a communication from Holman Taylor, Secretary of the State Medical Association, regarding a resolution recently adopted by the Society, concerning the dues of members who are called to active military service of the United States. It was stated that the matter would be called to the attention of the House of Delegates at its meeting in May.

John M. Furman, with appropriate remarks, presented Craig Munter, secretary of the Society for the past nine years, with a check for $60.00 in appreciation of the valuable services he had rendered. Dr. Munter expressed his thanks for the gift.

Resolutions of sympathy were adopted on the death of Mr. B. Deaton, father of Dr. H. O. Deaton, and Mr. William M. McVeigh, father of Dr. J. F. McVeigh.

William S. Webb, a member of the committee on medical economics, reported briefly concerning an agreement between the committee on medical economics of the State Medical Association and the National Youth Administration, with regard to medical service of clients of the N. Y. A. Dr. Webb moved that Dr. G. H. Thornhill of Austin, medical consultant for the N. Y. A. in Texas, be invited to discuss this subject before the Society at its next meeting, which motion carried.

New Member.—R. B. Wolford was elected to membership by transfer from the Ector-Midland-Martin-Howard-Andrews-Glasscock Counties Medical Society.

The attendance prize, a percolator, was won by Gatlin Mitchell.

Titus County Society

December 11, 1940

(Reported by Wm. A. Taylor, Secretary)

New Officers.—At a meeting of the Titus County Medical Society at the City Hall, Mount Pleasant, Texas, on December 11, 1940, the following officers were elected for 1941: President, John M. Ellis; vice-president, T. R. Bassett; secretary-treasurer, William A. Taylor: members, board of censors—A. A. Smith, Rufus D. Moore, Jr., and T. R. Bassett; delegate, W. A. Taylor, and alternate delegate, T. R. Bassett.

The following were appointed to the legislative committee: William A. Taylor, chairman; T. S. Grissom, and Tom Kelley.

A committee on military preparedness was appointed as follows: John M. Ellis, chairman; W. A. Taylor, and T. S. Grissom.

Central Texas District Society

January 14, 1941

(Reported by R. K. Harlan, Secretary)

The Twelfth (Central Texas) District Medical Society met January 14, 1941, at the Roosevelt Hotel, Waco. C. G. Catto, Waco, was chairman of the committee on arrangements. Dan Warren, president, presided, and the following scientific program was carried out:

The History of Surgical Societies—M. W. Sherwood, Temple.
(Discussed by H. R. Dudgeon and Dan Warren, Waco.)
X-Ray Treatment of Acute Infections—R. C. Curtis, Temple.
(Discussed by Dan Warren, Waco.)
Electroencephalography in Clinical Neurology—S. R. Snodgrass, Galveston.
(Discussed by Arnold Oscar Manske, Waco.)
The Diagnosis of Coronary Occlusion—E. H. Schwab, Galveston.
(Discussed by T. L. Denson, Cameron; Dan Warren, Waco, and R. K. Harlan, Temple.)
Sore Throat—T. L. Denson, Cameron.
(Discussed by J. W. Torbett, Marlin.)
The Diagnosis and Treatment of Some Stubborn Cases of Malnutrition—J. W. Torbett, Marlin.
(Discussed by V. D. Goodall, Clifton.)
Intravenous Anesthesia—S. L. Witcher and V. D. Goodall, Clifton.
(Discussed by H. R. Dudgeon, Waco, and Howard O. Smith, Marlin.)

At noon, a luncheon was held in the Ball Room of the Roosevelt Hotel, with 127 physicians and their wives attending. C. G. Catto, Waco, presided.

H. F. Connally, Waco, councilor of the Twelfth District, spoke on the work of the State Board of Medical Examiners.

N. D. Buie, Marlin, president-elect of the State Medical Association, discussed the agreement between the N. Y. A. and the State Medical Association on medical service for clients of the N. Y. A.

H. R. Dudgeon, Waco, discussed problems connected with crippled children's work.

Following the luncheon, a business meeting was held, at which Howard O. Smith, Marlin, was elected president for the ensuing year, and C. G. Swift, Cameron, was elected secretary-treasurer.

A discussion was had with regard to changing the January meeting from a morning and afternoon meeting to an afternoon and evening meeting. The matter will be decided at the July meeting of the Society.

Mrs. Kling of Austin presented to the Society the

matter of publishing a journal for the Central Texas District, and the Society voted its approval.

The president was directed to appoint committees to draw up resolutions on the death of its recently deceased members.

The Society will hold its next meeting in Cameron on July 8, 1941.

AUXILIARY NOTES

Officers of the Woman's Auxiliary to the State Medical Association of Texas; President, Mrs. William Hibbitts, Texarkana; honorary life president, Mrs. A. C. Scott, Sr., Temple; president-elect, Mrs. S. F. Harrington, Dallas; first vice-president, Mrs. H. Leslie Moore, Dallas; second vice-president, Mrs. A. E. Moon, Temple; third vice-president, Mrs. A. B. Pumphrey, Fort Worth; fourth vice-president, Mrs. Joe B. Foster, Houston; recording secretary, Mrs. Walter A. Minsch, Kerrville; publicity secretary, Mrs. W. F. Armstrong, Fort Worth; treasurer, Mrs. J. Frank Clark, Abilene; parliamentarian, Mrs. J. W. Tottenham, Brownwood; and corresponding secretary, Mrs. Ralph Cross, Texarkana.

A MESSAGE FROM THE PRESIDENT

Dear Auxiliary Members:

Spring has come again to Texas, and with it an increased interest in our Auxiliary work. I feel certain that each of our Auxiliaries are coöperating in every way with our state chairmen, and I am eagerly looking forward to your good reports when we meet in Fort Worth this May.

There is one project with which I am not satisfied: too few of our members are subscribing to, and reading the *Bulletin* of the Woman's Auxiliary to the American Medical Association. In order to advance we must first be informed, and I know of no better source of information, or inspiration for the Auxiliary member than the American Medical Auxiliary *Bulletin*. Here we find information about all of the various departments of our Auxiliary, other state programs, and helpful suggestions from the American Medical Association.

Each state quota is based upon one-fourth of the state membership. The Texas quota is 547 subscriptions. To date, we have only sixty-six subscribers.

If you are an officer, local or state, subscribe to the *Bulletin*.

If you have been elected to serve as an officer next year, be prepared to serve—subscribe to the *Bulletin*.

If you are an Auxiliary member, be an informed member—subscribe to the *Bulletin*.

If you think the Auxiliary is not accomplishing a great work, be enlightened about your organization—subscribe to the *Bulletin*.

Our state chairman is Mrs. F. F. Kirby, 2801 Sanger Ave., Waco. I hope that you will write to her at once to put your name on her subscription list. The price is one dollar for four issues.

MRS. WILLIAM HIBBITTS, President.

AUXILIARY NEWS

Bexar County Auxiliary entertained with a tea, January 10, 1941, in the Medical Library Building, honoring the members of the Dental Auxiliary.

Tea guests were received by Mesdames Herbert Hill, Manning Venable, Walter G. Stuck, J. L. Matthews, W. W. Bondurant, Carl Giesecke, Frank Paschal, Nat Kenney and George Paschal.

Mrs. W. H. Miller and Mrs. Max Johnson served, assisted by Mesdames Charles Boehs, W. E. Muldoon, W. M. Barron, R. G. Carnahan, A. F. Clark, S. Foster Moore, B. H. Passmore and J. L. Pridgen.

Preceding the tea, Mrs. Herbert Hill, chairman of the physical examination committee, presented an interesting program, with Dr. Minnie O'Brien as guest speaker. Mrs. E. J. Arendt, accompanied by Mrs. Harry Leap, sang two solos.

Mrs. I. T. Cutter, chairman of the philanthropic committee, reported that the milk bill for the Children's Shelter from May to January, had been paid. The Society's new project is to furnish milk to undernourished children in the public schools. Twenty-five dollars worth of baby foods and medicines were distributed to the orphanages and the Salvation Army, and one family was completely taken care of for Christmas.

Mrs. W. F. Shepherd, *Hygeia* chairman, reported that twenty one-year gift subscriptions and sixty-two six-months' subscriptions, had been obtained.

Big Bend Counties Auxiliary and the Big Bend Counties Medical Society, were the dinner guests of Dr. and Mrs. J. C. Darracott, November 12, 1940, at the Paisano Hotel, Marfa.

After dinner the Auxiliary met in separate session in the lounge of the hotel. The committee in charge of writing the constitution and by-laws, having met in October, presented the constitution and by-laws as drawn up, to the Auxiliary for its first reading.

Letters of congratulation and welcome to the Auxiliary, were read from Mrs. William Hibbitts, president of the State Auxiliary; Mrs. Leslie Moore, organization chairman of the State Auxiliary; and Mrs. Ralph Homan, councilwoman of District One.

In line with the state contest, the Auxiliary decided to sponsor an essay contest among the schools in the district.

Miss Katherine Schutze, who recently returned from a five-year stay in China, spoke briefly of the contrast in the lives of American and Chinese women. Miss Schutze was a teacher in China, and her impressions of that nation were of great interest to the group.

It was announced that the December meeting of the Auxiliary would be held in Fort Stockton.—Mrs. J. C. Darracott, Secretary.

Dallas County Auxiliary held its January meeting at the Dallas Country Club, Dallas, in honor of the year's new members. The honored members were: Mesdames B. H. Griffin, John G. Scales, John O. Baker, John S. Minett, John S. Bagwell, C. W. Thornton, I. A. Estes, C. Frank Brown, C. C. Tash, George S. Littell, Lawrence B. Sheldon, Mack E. Lott, C. A. Ault, Jr., T. S. Williams and Harry Spence.

Mrs. William Hibbitts, Texarkana, president of the State Auxiliary, was also an honor guest.

The honorees were seated at the speakers table.

Dr. Eugene L. Aten of the Dallas Child Guidance Clinic, spoke on "Mental Hygiene."

Henderson County Auxiliary held its annual Christmas party December 10, 1940, at the home of Mrs. W. R. Love, Athens, with eleven members answering roll call with interesting news of the medical world.

Mrs. Love gave a review of "Mrs. Miniver," which was followed by a round table discussion of the book and its English setting.

Christmas decorations created a holiday spirit, and gifts were distributed from a table tree, after which refreshments were served.

Henderson County Auxiliary met January 14, 1941, at the Woman's Club Room, Athens.

Mrs. R. H. Hodge spoke on "The Responsibility of Women for Good Health," and Mrs. A. H. Easterling spoke on the subject, "An Annual Physical Examination."

Plans were made for the annual doctors banquet, which will be held February 11, with Dr. W. W. Bauer of Chicago as guest speaker.—Mrs. Robert H. Hodge, President.

Hunt-Rockwall-Rains Counties Auxiliary met January 7, 1941, at the home of Mrs. E. R. Lampkin, Greenville, with nineteen members present, who an-

swered the roll call on the subject, "Before the Doctor Comes." Co-hostesses with Mrs. Lampkin were Mesdames Henry Wilson, L. R. Davis, H. E. King and W. L. Yarbrough. Mrs. M. L. Wilbanks presided in the absence of Mrs. T. C. Strickland, president.

Mrs. J. W. Ward gave the devotional and used as her theme, "The Use of Our Time During the New Year."

Mrs. W. P. Phillips reviewed "The Desert Doctor," by Jerome Baity, and Mrs. E. R. Lampkin concluded the program by playing a group of piano selections.

Jefferson County Auxiliary held its regular luncheon meeting January 8, 1941, at the Goodhue Hotel, Port Arthur, with eighteen members present. Mrs. I. T. Young, Port Arthur, presided at the business session.

The Auxiliary voted to sponsor a Camp Fire group in both Beaumont and Port Arthur, and to assist the Red Cross in knitting sweaters.

Mrs. A. R. Autrey rendered some piano selections.

Hostesses for the luncheon were Mrs. B. J. Fett and Mrs. James Makins, Port Arthur.

Johnson County Auxiliary held its annual Christmas social, December 11, 1940, at the home of Dr. and Mrs. O. N. Morgan, Cleburne, with a seated tea and program. About eighty members and guests were present. Christmas decorations adorned the home with appointments suggestive of the holiday season.

Mesdames B. H. Turner and T. C. Honea, presided at the silver service, and Mesdames J. W. Campbell, James E. Curtis and R. A. Worley and Miss Blanche Marie Morgan, assisted.

Miss Lois Ellis played two piano selections, "Romance" by Sibelius, and "Valse Brilliance" by Mana-Zucca. Mrs. Veola Warren Short sang two Christmas songs accompanied by Mrs. W. E. Borger. Mrs. Lawrence Rudd told a Christmas story by Eleanor Roosevelt.

At the conclusion of the program, at the request of guests, Miss Blanche Marie Morgan played two piano selections, "Arkansas Traveler" by David Gouin, and a classic negro spiritual.

The receiving line was composed of Mesdames Mills Dennis; O. N. Morgan, the hostess; C. C. Jowell, president of the auxiliary; M. T. Know, vice-president, and R. W. Kimbro, secretary. Mesdames Veola Short, Lawrence Rudd and W. E. Borger, and Miss Lois Ellis, were members of the program committee, and were also in the receiving line.

Johnson County Auxiliary honored physicians and their families who will soon depart for duty with the National Guard at Brownwood, with a formal supper, December 18, 1940, at the home of Dr. and Mrs. Mills Dennis, Cleburne. Eleven physicians, ten auxiliary members and two guests were present.

Following the supper, an impromptu program was enjoyed, each physician leaving for Brownwood, telling what his duties will be with the National Guard. Drs. Mills Dennis and W. R. Washburn gave interesting accounts of their experiences in the Philippines during the Spanish-American War.

Mrs. O. N. Morgan, accompanied by Mrs. Mills Dennis, sang two patriotic solos, and at the close of the evening, the entire group sang "God Bless America."

Tom Green Eight County Auxiliary held a luncheon meeting January 6, at the Hotel Cactus, San Angelo, honoring Mrs. William Hibbitts, Texarkana, president of the State Auxiliary. Sixteen members and two guests were present.

Mrs. William Grady Mitchell, president, presided, and introduced Mrs. Hibbitts, who spoke on the subject, "Budgeting Your Club Work." She placed emphasis on belonging to fewer clubs and doing more work in each.

Mrs. Charles Bailey, Ballinger, council woman of District Four, was also a guest.

The following were appointed as a nominating committee: Mesdames W. L. Bush, chairman, R. L. Powers, and Lewis K. Tester.

Mrs. William Grady Mitchell, president, resigned and Mrs. Harlan Horney, first vice-president, is to complete her term.

Plans were made for a book review at the February meeting.

Serving as hostesses were members of the social committee and Mesdames J. A. Bunyard, Carl A. Kunath, and W. Grady Mitchell.

Tom Green Eight County Auxiliary members were the guests of Mrs. B. T. Brown, San Angelo, at a coffee in her home, January 8, honoring Mrs. William Grady Mitchell, who moved to Parris Island, South Carolina, recently. Mrs. D. D. Wall presided at the coffee service, and eleven members attended.—Mrs. Lewis K. Tester.

Mrs. R. B. Anderson of Fort Worth, a member of the Tarrant County Auxiliary and wife of Dr. R. B. Anderson, Assistant Secretary of the State Medical Association and Associate Editor of the TEXAS STATE JOURNAL OF MEDICINE, died January 31, 1941.

BOOK NOTES

[1]**Physical Diagnosis.** By Ralph H. Major, M. D. Professor of Medicine, in the University of Kansas. Second Edition, Revised. Cloth, 464 pages with 437 illustrations. Price, $5.00. W. B. Saunders Company, Philadelphia and London, 1940.

In this second edition of his well-known book on physical diagnosis, Dr. Major has continued to present the subject in a most interesting and stimulating manner. In doing this he has made the best use of his wide knowledge of the important medical classics, and where possible has quoted directly many of the original, superb descriptions of the old masters of clinical observation, who were able not only to see clearly, but to describe what they saw.

This book has a distinct clinical flavor. It attempts to preserve and encourage the fundamentals of exact observation and painstaking examination of the patient. It imparts to the reader a real desire to improve his skill in the techniques of physical diagnosis, and throughout it emphasizes the physical causes which produce physical signs.

In this second edition much new material has been added, especially to the sections on the examination of the abdomen, genitalia, extremities, and nervous system. It is particularly gratifying to find an increased emphasis on the examination of the abdomen, since this has often been slighted in textbooks of this kind, probably because of the growing dependence on x-ray examination, and of the wider variety of signs produced in the chest. The descriptions of the extremities in various diseases are very interestingly presented in the text, and extremely well complemented by the illustrations.

The section on examination of the heart, to select another example, most ably presents the subject from the clinical standpoint, and, in addition, makes extremely interesting reading. It would be difficult to find a clearer or simpler presentation.

This book can be recommended heartily to the student and practitioner who is desirous of cultivating within himself the art of physical diagnosis, and of acquiring a more exact knowledge of the kind and manner of production, of physical changes caused by disease.

[1]Reviewed by Hatch W. Cummings, Jr., M. D., Houston, Texas.

[2]**Clinical Diabetes Mellitus and Hyperinsulinism.** By Russell M. Wilder, M. D., Ph. D., F. A. C. P. Professor and Chief of the Department of Medicine, The Mayo Foundation for Medical Educational Research, University of Minnesota; Head of the Section on Metabolism Therapy, Division of Medicine, The Mayo Clinic, Rochester, Minnesota. Cloth, 418 pages. Price, $6.00. W. B. Saunders Company, Philadelphia and London, 1940.

This book is an exceedingly practical treatise on all the clinical aspects of diabetes and hyperinsulinism. After a brief consideration of the factors influencing the sugar of the blood, diabetes mellitus is defined, the diagnosis, differential diagnosis, pathogenesis, prevention, prognosis and course are discussed. The various insulins are described and explicit directions are given for their administration. Chapter 7 describes the diet therapy of diabetes and twenty-seven pages of diet substitutions and recipes follow. The complications of diabetes are discussed under the following headings: acidosis and coma, infections, surgical operations, genito-urinary and gynecologic disorders, pregnancy, diseases of the thyroid gland, diseases of the endocrine glands, disorders of the eye, disorders of the nervous system, diseases of the skin, disorders of the digestive organs. A chapter is devoted to hemochromatosis and another to arteriosclerosis and diseases of the heart. The last four chapters cover hyperinsulinism. There is a valuable appendix.

Dr. Wilder defines diabetes mellitus as an abnormality of metabolism created by insufficiency of the insular activity of the pancreas. The most dependable criterion for diagnosis is a persistence of a tendency to elevation of the level of the blood sugar. When a pancreas fails it is because of insufficiency of its insular reserve. The primary cause is an inborn biological inferiority, primarily of the insular tissue. Precipitants of this break in compensation are diseases which destroy the tissue of the pancreas, such as pancreatitis, arteriosclerosis, hemochromatosis, cholecystitis, and those which create a greater demand for insulin, as obesity, hyperactivity of the thyroid, adrenal or pituitary glands, or excessive climatic changes.

In his experience most patients needing an appreciable amount of insulin cannot be controlled by protamine zinc insulin alone; his practice is to give in the same syringe each morning the necessary amount of regular insulin. His diets have a relatively high content of fat; the ratio of carbohydrates to fat is usually less than 1:1.

Dr. Wilder's stand on the controversial phases of treatment of diabetic coma are as follows: (1) He believes that alkalies by mouth and intravenously are often of value; (2) he prefers to give glucose in small amounts and preferably by mouth; (3) he uses digitalis, about 8 cat units in sixteen hours.

Carbuncles are not incised but are treated with warm compresses and intravenous methenamine. At the time of the writing of his book, he was beginning to use sulfanilamide and related compounds.

In all cases of pregnancy complicating diabetes, a cesarean section is done in the thirty-sixth to the thirty-seventh week; and extreme care is exercised, by the use of incubator and oxygen, early injections of dextrose and frequent feedings of dextrose or karo to preserve the life of the newborn infant, who nearly always shows evidence of hypoglycemia.

Hypoglycemia is found much more often than true hyperinsulinism and occurs rarely as a result of disturbances of glycogen storage in the liver or muscles, dysfunction of other glands of internal secretion, and most frequently of all, neuroses. Dr. Wilder's criteria for diagnosis of hyperinsulinism are: (1) An absence of these above mentioned disorders; (2) fasting blood sugars less than 60 mg.; and (3) intolerance for fasting. The pathological lesion is either an insular tumor or insular hyperplasia, and the only successful treatment is surgical removal of the tumor, which is hard to find, or removal of a portion of the hyperplastic tissue.

The book is beautifully set in easily read type; the style is clear and succinct; the subject engrossing, and the ideas advanced have been distilled in the fires of numerous diabetic flames.

[3]**Methods for Diagnostic Bacteriology.** A Complete Guide for the Isolation and Identification of Pathogenic Bacteria for Medical Bacteriology Laboratories. By Isabelle G. Schaub, A. B., Assistant in Bacteriology, Department of Pathology and Bacteriology, The Johns Hopkins University School of Medicine and M. Kathleen Foley, A. B., Bacteriologist in Charge of the Diagnostic Bacteriological Laboratory of the Medical Clinic, The Johns Hopkins Hospital, Baltimore. Cloth, 313 pages. Price, $3.00. The C. V. Mosby Company, St. Louis, 1940.

This manual presents concisely methods which have been found useful in clinical bacteriology. It covers methods for culturing of materials, procedures for identifying the organisms isolated, technics for the use of known immune sera in identification, tests for antibodies in patients' sera (exclusive of the serology of syphilis), and formulae for the media, stains and miscellaneous reagents necessary for the indicated procedures.

Carrying out the directions as given would seem to require a larger staff than most bacteriology laboratories enjoy. Space is provided conveniently in the book for alterations or extensions of the directions, thereby making wise provision for inevitable differences of opinion as to the best medium, test reagent, or staining procedure. The book should prove of great value in organizing laboratory routine. The organization of this book brings out an interesting detail, which is that the procedure adopted in a laboratory examination often depends on what is sought. The close collaboration of clinician and bacteriologist at this point can do much to make bacteriology more useful in medical practice.

Taber's Cyclopedic Medical Dictionary. By Clarence Wilbur Taber and Associates. Fabrikoid, 1,300 pages, 273 illustrations. Price $3.00. F. A. Davis Company, Philadelphia, 1940.

This is quite the most compact dictionary we have ever seen, abridged or unabridged. It is rather amazing that the publishers have gotten so much in such little space and without the appearance of abridgement, other than the size of the book. The paper upon which it is printed is thin but not especially so. The type is small but clear and not at all too small. Doubtless many words ordinarily included in medical dictionaries have been omitted but a fair search has failed to disclose the omission of any words of importance. As a matter of fact, there are 50,000 words in the dictionary, with illustrations, covering 1,300 pages.

A feature of the book is the rather considerable number of medical synonyms given, all with definitions. Over 600 drugs, including New and Nonofficial Remedies, are defined and discussed. Especial attention seems to have been given the rather intricate terms used in psychiatry. Reference is frequently made to related subjects in discussing the vocabulary word. An effort is made to connect the

[2]Reviewed by W. W. Bondurant, Jr., M. D., San Antonio, Texas.

[3]Reviewed by McDonald Fulton, Ph. D., Assistant Professor of Bacteriology, Baylor University College of Medicine, Dallas, Texas.

technical with the popular names used in medicine. A rather unique addition is a so-called "interpreter," in which over 370 questions to ask a patient are framed in five different languages.

In short, this is a rather conveniently compiled and apparently competent dictionary, whether or not completely so must remain to be seen.

DEATHS

Dr. Calvin Richards Hannah, of Dallas, Texas, died December 16, 1940, in a Dallas hospital, of coronary occlusion.

Dr. Hannah was born May 22, 1872, in Chrisman, Illinois, the son of David and Nancy Jane Hannah. His academic education was obtained in the public schools of that state and DePauw University, Greencastle, Indiana, and the University of Illinois. His medical education was received in the Illinois Medical College, from which he was graduated in 1904. Following his graduation he served an internship in the American Hospital in Aguas Calientes, Mexico. He then served as assistant surgeon of the Mexican Central Railway. In 1905 he located in Dallas, Texas, for the private practice of medicine. He was soon made assistant city health officer and became connected with Baylor University College of Medicine as a teacher. In 1907, he became professor of obstetrics in that institution, which position he held until his death. He also served as obstetrician-in-chief at Baylor University and Parkland Hospitals from 1907 until his death. He served as a member of the advisory board of Baylor University College of Medicine during this same period of time. He was a member of the board of directors of Parkland Hospital from 1918 to 1935. He was a co-founder of Hope Cottage, a foundling institution in Dallas, which he served as a director from the time of its organization until his death. He was also a past president of the directors of this institution.

DR. CALVIN R. HANNAH

Dr. Hannah was a member continuously in good standing of the Dallas County Medical Society, State Medical Association and American Medical Association from 1906 until his death. He served the Dallas County Medical Society as president in 1914. He represented Dallas County Medical Society many terms in the House of Delegates of the State Medical Association and in this capacity served on many important committees. Only a short while before his death he had been elected as a delegate to represent his society at the State Medical Association meeting in 1941. He was a vice-president of the State Medical Association in 1926-1927, and served the State Medical Association as chairman of its Section on Gynecology and Obstetrics in 1927. For many years he served the State Medical Association as a member of its legislative committee, an important and exacting office. He was the first chairman of the committee on maternal and child health of the State Medical Association of Texas, after the establishment of this committee following the passage of the National Social Security Act. He had worked zealously in the postgraduate refresher courses in obstetrics conducted by the State Health Department in coöperation with the State Medical Association, which work was carried on under the advisory direction of the State Association committee on maternal and child health. He was the seventy-first president of the State Medical Association, serving during the year 1937-1938. His administration was marked by the attention given to scientific activities of the Association, in which his talents peculiarly lay as a leader.

Dr. Hannah was a charter member and first president of the Texas Association of Obstetricians and Gynecologists. He was a charter member and one of the organizers of the Central Association of Obstetricians and Gynecologists and in 1937 was vice-president of that organization. He was a Fellow of the American Medical Association, the American College of Surgeons, the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, and a diplomate of the American Board of Obstetrics and Gynecology. In 1930 he served as a member of the White House Conference on Child Health and Protection, as a committeeman on prenatal and maternal care. He represented the obstetrical section of the Southern Medical Association as its committeeman on the American Committee on Maternal Welfare. For his national service in this field he received a personal letter of commendation from the late President Hoover.

Dr. Hannah was best known in Texas and throughout the nation as a teacher of obstetrics. His influence in this field was tremendous. Rather plain spoken and characterized by abrupt mannerisms, undergraduate and postgraduate students never failed to remember what Dr. Hannah taught them in obstetrics. He fought radical, meddlesome obstetrics with unrelenting energy, all the while keeping an open mind toward new and constructive thought. He had an uncanny ability to recognize fads, fancies and pseudo science and sidetracked these with sound and skillful teaching. In the field of gynecology he constantly cautioned against needless operations. It may be said that conservatism was synonymous with the name of Dr. Hannah in the practice of both obstetrics and gynecology. Medical students and nurses of Baylor University will miss his gentle admonitions and stern reproofs. Underneath these was a warm sympathetic heart, stirred unceasingly in honesty of purpose in teaching.

Dr. Hannah had made outstanding contributions to medical literature in his field. He was recognized widely as an authority in obstetrics and gynecology. His influence in this field will live long after his passing.

Dr. Hannah was a member of the North Texas District Medical Society, the Dallas Southern Clinical Society, and the Theta Kappa Psi medical fraternity. He was a member of the Episcopal Church. He was a Mason and an active member of the Dallas Rotary Club.

Dr. Hannah was married March 7, 1923, to Miss Katherine Crenshaw Duvall of Richmond, Virginia. He is survived by his wife; four sisters, Mrs. Truman Weinbold of Indiana, Mrs. Almeda Leach and Mrs. Margaret Stout of Illinois, and Mrs. Clara B. Tucker of Missouri; and three brothers, George and Allen Hannah of Kansas, and James Hannah of Iowa.

Dr. Isaac A. Withers of Fort Worth, Texas, died December 1, 1940, at his home, following an extended illness.

Dr. Withers was born January 4, 1875, at Joshua, Johnson County, Texas, the son of John N. and Jennie Withers, who came to Texas from Kentucky in 1870. Dr. Withers received his academic education in the Fort Worth public schools, the old Fort Worth University and the Add Ran Christian College at Thorpe Springs. His medical education was obtained in the medical department of the old Fort Worth University, from which he was graduated in 1898. Immediately after his graduation he entered the Medical Corps of the United States Army for service in the Spanish-American War. After that war he returned to Boston, where he served two years' internship in the Massachusetts General Hospital. He then located in Fort Worth for the private practice of medicine, which was his home for the remainder of his professional life. Shortly after returning to Fort Worth he taught gynecology in the old Fort Worth Medical School until the merger of that institution with Baylor University College of Medicine in Dallas.

DR. I. A. WITHERS

During the World War, Dr. Withers again volunteered his services and received a captain's commission in the Medical Corps of the U. S. Army. He was stationed at Camp Greenleaf, Fort Oglethorpe, Georgia; Camp McClellan in Alabama, and was awaiting transport overseas at Camp Crane in Pennsylvania, when the Armistice was signed. He was then ordered back to Camp Bowie, Fort Worth, where he was chief of surgical services until he received his discharge. During his military career he was advanced to the rank of Major and at the time of his discharge he was made a Lieutenant-Colonel in the Medical Reserve Corps. As a medical reserve officer he was commanding officer of Surgical Unit No. 101.

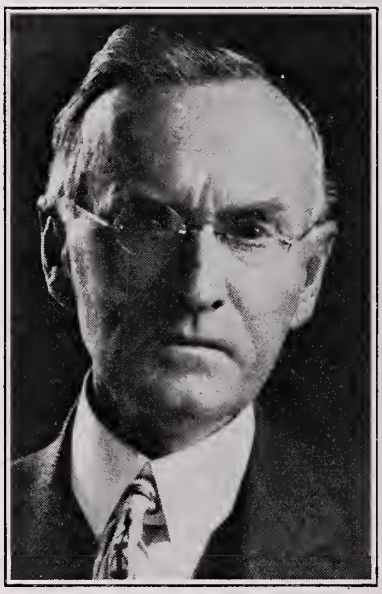
Dr. Withers was a member continuously in good standing of the Tarrant County Medical Society, State Medical Association and American Medical Association, throughout his professional career in Texas. He was elected an honorary member of the State Medical Association in 1940, which membership status had continued until his death. Early in his career he served the city of Fort Worth as health officer. He was a past president of the Tarrant County Medical Society. He was for many years a member of the board of directors of All Saints Hospital, Fort Worth.

Dr. Withers served as a member of the Texas State Board of Medical Examiners from 1927 until 1936, with the exception of an interval of two years in that period of time. He became president of the Board in 1933. Affectionately called "Dr. Ike" by those who knew him well, both doctors and laymen, he was an unpretentious, skilled doctor of medicine, whose specialty was gynecology.

Dr. Withers was married in 1902 to Miss Ida Ryan of Fort Worth. He is survived by his wife; a son, I. A. Withers, Jr., Fort Worth; a brother, G. H. Withers, Amarillo, and six sisters, Mrs. J. M. Richards of Weatherford, Mrs. A. B. McAfee of Pampa, Mrs. John P. Cox and Mrs. R. J. Newton both of Fort Worth, Mrs. George W. Roff of Seagraves, and Mrs. W. M. Jackson of Eton, Georgia.

Dr. Uel Keith, of Fort Worth, Texas, died December 18, 1940, of heart disease, while visiting a daughter at Midland, Texas.

Dr. Keith was born February 10, 1868, at Stephenville, Texas, the oldest son of Martin Luther and Mary Boucher Keith, pioneers of Erath County. His preliminary education was received in the public schools of Stephenville. He was first educated in pharmacy in the University of Texas School of Pharmacy at Galveston. After a few years of pharmaceutical practice he decided to study medicine. His medical education was obtained in the old Fort Worth Medical College and the Chicago Polyclinic. He began the practice of medicine at Stephenville, where he remained for twenty years. In 1918 he located at Thurber, where he was physician for the Texas Pacific Coal and Oil Company until 1934, at which time that company moved its headquarters to Fort Worth.



DR. UEL KEITH

Dr. Keith was a charter member of the Erath County Medical Society and held membership in this society while residing in Stephenville and Thurber. He was also a member of the State Medical Association and American Medical Association. He was elected an honorary member of the State Medical Association in 1934. He served the Erath County Medical Society as secretary one year, and during his residence at Stephenville was health officer of Erath County sixteen years. He was a member of the Baptist Church and for several years was a member of the Knights of Pythias. He was a conscientious, ethical, capable general practitioner held in high esteem by his associates and clientele.

Dr. Keith is survived by his wife, the former Lou Ella Harwood, to whom he was married December 3, 1891, at Stephenville. He is also survived by one son, Harwood Keith, Borger; three daughters, Mrs. Clint Kimbro of Fort Worth, Mrs. C. E. Parker of Odessa, and Mrs. O. L. McNew, Midland; two brothers, Guy and Ira Keith, Ralls, and one sister, Miss Bonnie Keith, San Antonio.

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Vol. XXXVI **March, 1941** **No. 11**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

Honor Guests for the 1941 Annual Session comprise a distinguished group of teachers and clinicians. The Council on Scientific Work and section officers for 1941 are to be congratulated upon their selection, not only of the honor guests, but of the practical subjects they have chosen for presentation by these guests on the programs of the general meetings, the various scientific sections and and combined sections. Among the subjects noted are pancreatitis, biliary tract disease, duodenal ulcer, appendicitis, neoplastic disease, gastro-intestinal tract hemorrhage, bronchial lesions, cardiac conditions as angina pectoris and endocarditis, arterial hypertension, anxiety states, pointers in physical diagnosis, hyperemesis gravidarum, exophthalmos, vitamin deficiencies, sulfanilamide therapy, and less common but interesting conditions such as coccidioidomycosis and trichinosis, and others.

Full advantage of the teaching talents of the guests will be utilized at the clinical luncheons, conducted on the question and answer basis.

In addition to the clinical luncheons, each guest will deliver an address at one of the general meetings of the Association, as well as address or read a paper before one of the eight scientific sessions. Also, nine of our honor guests will make twenty minute talks on timely subjects at a combined sections meeting, a program that could hardly be excelled in scientific interest and information.

While the presentations of the honor guests are but a part of the scientific program of the annual session, they are too valuable to be missed by any physician who can possibly attend the Fort Worth Session.

The honor guests for 1941 and the details concerning their presentations, follow:

Lawrence S. Fallis, M. D., F. A. C. S., Detroit, Michigan, is a guest of the Section on Surgery. Dr. Fallis is Surgeon-in-Charge, The Division of General Surgery, Henry Ford Hospital, Detroit, Michigan. He will address the general meeting, Thursday morning, May 15, on the subject, Diagnosis and Treatment of Pancreatitis," and the Combined Sections Meeting on Thursday afternoon, May 15, on the subject, "When to Advise Operation on Acute Cholecystitis." Dr. Fallis will address the Section on Surgery, Tuesday afternoon, May 13, on the subject, "Surgery of the Rectum and Large Bowel." He will be a guest speaker at the Surgery, Obstetrics and Gynecology Clinical Luncheon, Wednesday, May 14, and one of the guest speakers at the Combined Sections Luncheon, Thursday, May 14. He will attend and participate in all the meetings of the Section on Surgery.

Roscoe R. Graham, M. B., F. R. C. S., Toronto, Canada, is a guest speaker of the Section on Surgery. Dr. Graham is Assistant Professor of Surgery, University of Toronto, and Senior Surgeon, Toronto General Hospital. He will address the general meeting, Wednesday afternoon, May 14, on the subject, "The Present Status of Surgical Procedures in the Biliary Tract;" the Section on Surgery, Wednesday morning, May 14, on the subject, "Surgical Procedures for Duodenal Ulcers;" and the Combined Sections Meeting on Thursday afternoon, May 15, on "The Management of Late Cases of Appendicitis." He will be a guest speaker at the Surgery, Obstetrics and Gynecology Clinical Luncheon, Wednesday, May 14, and one of the guest speakers at the Combined Sections Luncheon, Thursday, May 15. He will be in attendance on the Section on Surgery throughout its meeting.

George W. Holmes, M. D., Boston, Massachusetts, is the guest of the Section on Radiology and Physio-

therapy. Dr. Holmes is Clinical Professor of Roentgenology, Harvard Medical School and Roentgenologist, Massachusetts General Hospital, Boston, Massachusetts. He will address the general meeting, Thursday morning, May 15, on the subject, "The Present Status of Irradiation Treatment in Neoplastic Diseases," and the Combined Sections Meeting on Thursday afternoon, May 15, on the subject, "The Roentgen Findings in Obstructing Lesions of the Bronchi." Dr. Holmes will address the Section on Radiology and Physiotherapy, Tuesday afternoon, May 13, on the subject, "The Roentgen Examination as a Diagnostic Procedure in Hemorrhage from the Gastro-intestinal Tract." He will be a guest speaker at the Surgery, Obstetrics and Gynecology Clinical Luncheon, Wednesday, May 14, and one of the guest speakers at the Combined Sections Clinical Luncheon, Thursday, May 15. He will attend and participate in all the meetings of the Section on Radiology and Physiotherapy.

William J. Kerr, M. D., San Francisco, California, is a guest of the Section on Medicine. He is Professor of Medicine, University of California Medical School; Physician-in-Chief, University of California Hospital; Consulting Physician, San Francisco City and County Hospital, San Francisco, California. He will address the general meeting, Wednesday afternoon, May 14, on the subject, "Angina Pectoris—Etiology, Differential Diagnosis and Treatment;" the Section on Medicine, Wednesday morning, May 14, on the subject, "The Use of Radioactive Elements in Diagnosis and Treatment;" the Combined Sections Meeting on Thursday afternoon, May 15, on "The Anxiety States —Etiology and Treatment." He will be a guest speaker at the Medicine and Pediatrics Clinical Luncheon, Wednesday, May 14, and the Combined Sections Luncheon, Thursday, May 15, and will be in attendance on the Section on Medicine throughout its meeting.

Frederic W. Schlutz, M. D., Chicago, Illinois, is the guest of the Section on Pediatrics. Dr. Schlutz is Professor of Pediatrics and Chairman of the Department, The University of Chicago, Chief of Staff, Bobs Roberts Memorial Hospital for Children, The University of Chicago; Consultant, Children's Memorial Hospital, Chicago. He will address the general meeting, Wednesday afternoon, May 14, on the subject, "Present-Day Possibilities of Endocrine Therapy in Pediatrics;" the Section on Pediatrics, Wednesday morning, May 14, on the subject "Facts and Fancies About Vitamin A and B Deficiencies;" and the Combined Sections Meeting on Thursday afternoon, May 14, on, "The Use of Sulfanilamide Therapy and Its Dangers." He will be a guest speaker at the Medicine and Pediatrics Clinical Luncheon, Wednesday, May 14, and one of the guest speakers at the Combined Sections Luncheon, Thursday, May 15. He will attend and participate in all the meetings of the Section on Pediatrics.

Algernon B. Reese, M. D., New York City, is the guest speaker of the Section on Eye, Ear, Nose and Throat. Dr. Reese is Attending Surgeon, Institute of Ophthalmology; Ophthalmologist, Memorial Hospital for the Treatment of Cancer and Allied Diseases; Consulting Ophthalmologist, Roosevelt Hospital, New York City. He will address the general meeting, Tuesday morning, May 13, on the subject, "The More Recent Advances in Ophthalmology;" the Section on Eye, Ear, Nose and Throat, Wednesday morning, May 14, on the subject, "Applied Anatomy of the Eye with Particular Regard to the Surgical Aspects;" and the Combined Sections Meeting on Thursday afternoon, May 15, on "Exophthalmos." He will be the guest speaker at the Eye, Ear, Nose and Throat Clinical Luncheon, Wednesday afternoon, May 14, and one of the guest speakers at the Combined Sections Luncheon. He will attend and participate in all meetings of the Section on Eye, Ear, Nose and Throat.

James B. McNaught, M. D., San Francisco, California, is the guest speaker of the Section on Clinical Pathology. Dr. McNaught is Associate Professor of Pathology, Stanford University School of Medicine, San Francisco, California. He will address the general meeting, Thursday morning, May 15, on the subject, "Medical and Public Health Aspects of Trichinosis;" the Section on Clinical Pathology, Wednesday morning, May 14, on the subject, "The Diagnosis of Trichinosis;" and the Combined Sections Meeting on Thursday afternoon, May 15, on "The Present Status of Coccidioidomycosis (Infection Caused by Coccidioides immitis)." He will be a guest speaker at the Medicine and Pediatrics Clinical Luncheon, Wednesday, May 14, and one of the guest speakers at the Combined Sections luncheon, Thursday, May 15, in addition to being in attendance throughout the session of the meetings of the Section on Clinical Pathology.

E. D. Plass, M. D., Iowa City, Iowa, is the guest of the Section on Obstetrics and Gynecology. Dr. Plass is Professor and Head of the Department of Obstetrics and Gynecology, State University of Iowa, Iowa City, Iowa. He will address the general meeting, Tuesday morning, May 13, on the subject, "Hypertension in Pregnancy;" the Section on Obstetrics and Gynecology, on Tuesday afternoon, May 13, on the subject, "The Treatment of Puerperal Infection," and on Wednesday morning, May 14, on the subject, "Contracted Pelvis and Delayed Labor;" and the Combined Sections Meeting on Thursday afternoon, May 15, on "Hyperemesis Gravidarum." He will be a guest speaker at the Surgery, Obstetrics and Gynecology Clinical Luncheon, Wednesday, May 14, and one of the guest speakers at the Combined Sections Luncheon, Thursday, May 15. He will be in attendance on the Section on Obstetrics and Gynecology throughout its meeting.

Ralph H. Major, M. D., LL. D., Kansas City, Missouri, is a guest of the Section on Medicine. He is

Professor of Medicine, University of Kansas School of Medicine, Kansas City, Kansas. Dr. Major will address the general meeting on Tuesday morning, May 13, on the subject, "The Importance of Physical Diagnosis in the Practice of Medicine;" the Section on Medicine on Wednesday morning, May 14, on the subject, "Endocarditis Lenta;" and the Combined Sections Meeting on Thursday afternoon, May 15, on "Arterial Hypertension." He will be a guest speaker at the Medicine and and Pediatrics Clinical Luncheon on Wednesday, May 14, and one of the guest speakers at the Combined Sections Luncheon, Thursday, May 15. He will attend and participate in all the meetings of the Section on Medicine.

W. S. Leathers, M. D., LL. D., Nashville, Tennessee, is the guest of the Section on Public Health. He is Dean and Professor of Preventive Medicine and Public Health, Vanderbilt University School of Medicine, Nashville., Tenn. Dr. Leathers will address the general meeting on Thursday morning, May 15, on the subject, "Recent Advances in Public Health," and the Section on Public Health on Wednesday morning, May 14, on the subject, "The Significance of Qualified Personnel in the Advancement of Public Health." He will attend and participate in both sessions of the Section on Public Health.

We look forward to a record-breaking attendance at Fort Worth, May 12-15, regardless of war conditions. Physicians in active military service in Texas will no doubt find it possible to attend some part of the annual session, and in addition to our own members, we shall perhaps have a number of distinguished visiting physicians stationed at army camps in Texas. The complete scientific program of the annual session, together with all pertinent details regarding entertainment, and the like, will appear in the April number of the JOURNAL.

The Legislative Situation at Austin is assuming proportions. Numerous measures pertaining to the public health and the practice of medicine have been introduced. As usual, some are bad, some are worse, and a few are good. Our legislative committee, it may be said in passing, is giving close study to all of these measures, and at the proper time (we hope) will advise county medical societies, and suggest such action as may be indicated.

In the meantime, it is certainly important that members of county medical societies, particularly the responsible officers thereof, advise their respective legislators of their views with respect to pending medical and public health legislation. Otherwise, how can the laymen, such as our legislators are, be expected to formulate judgment which will be protective in such matters. Some legislators are, as we have previously and frequently observed, of contrary disposition, with reference to orthodox medicine and public health, but most of them are not so. Indeed, most of them are wholly orthodox, believe in the judgment of their medical friends, particularly their family physicians, and want to do the right thing, the welfare of the public always being paramount. It seems that the great trouble is inducing the medical friends and constituents of legislators to correspond with them in such matters, and explain the points at issue. It is a bit troublesome to write a letter of any sort, and doctors are busy. We would remind our readers, however, that it is less trouble to write an explanatory letter than it is to undo the damage done by harmful legislation.

It is also a fact, we believe, that the average legislator not only wants to do the right thing, but he wants his constituents to know that he wants to do the right thing, and that, in fact, when opportunity offers, he does it. Perpetuation in politics is evidently incident to favorable publicity, and while perpetuation in politics is not essential to any legislator, it is true that if he expects to accomplish anything for his people he must be perpetuated in politics. As former Lieutenant Governor Edgar Witt once said, "We have much to say about the difference between politics and statesmanship. We fail to remember that if a member of the legislature does not watch his politics he won't get to 'state' anything, and the average member of the legislature is there to do some stating and get something done."

The following brief account of measures so far introduced may be of interest at this time:

Chiropractic legislation was referred to in these columns last month. The original measure is known as H. B. 189. That measure has been referred to the Committee on State Affairs, and there will be a hearing on the measure March 12. The Legislative Committee of the State Medical Association will appear in opposition to the bill. We understand that the state association of Osteopathic physicians will also appear against the bill. It seems that another chiropractic bill has been introduced (H. B. 459), by Representative V. E. Goodman of Tarrant county. It is, if anything, more pernicious in its provisions than House Bill 189. No hearing has so far been set for this measure. It has been referred to the State Affairs Committee.

We understand that there is still another version of a chiropractic enabling act to be introduced. It will come from a group of chiropractors who apparently have very divergent views from those who are evidently in the saddle in the chiropractic organizations of the state. We are rather of the opinion that little will come of their effort, whatever happens to the legislation proposed by the majority group.

Our leaders should certainly lose no opportunity to impress upon their legislators the potentially

dangerous character of such legislation as this, and particularly this.

Liquor.—There are several bills pertaining to the control of liquor as a beverage. Some of these do not concern the medical profession, but some of them do. It is not feasible to analyze these bills in this discussion. Suffice it to say that our legislative committee is trying to adjust the several bills with that part of liquor control which has involved the medical profession and may be justified in the light of scientific medicine. As we have said before, in this connection, the legislature has no right to tell the practicing physician what he may and what he may not prescribe in the course of his practice, but the legislature does have a right to control a situation which is inimicable to the public welfare, even though it does involve, to some extent, the right of the physician to prescribe anything he feels is best for his patient. Just such a condition exists in connection with alcoholic beverages.

The plain truth of the matter is, the present law is sufficient for the occasion. We do know, however, that if a physician in good faith examines a patient, or in some way determines the condition of a patient prior to prescribing alcoholic liquor for him, the thousands of liquor prescriptions now on file in the drug stores of this state will be reduced to perhaps less than as many hundred. That would not be so bad, and under such circumstances there no doubt would be no agitation by thoughtful people for any such legislation. We exclude from this consideration the unreasoning enthusiast.

In the light of the situation as it has developed, undoubtedly the medical profession would rather relinquish its right and privilege of prescribing alcoholic liquors than to suffer the criticism that has come upon it by the practices complained of in this connection. We hope the problem can be approached in the light of reason rather than in the interest of the crusader. We owe much to the crusader, but we do not believe he fits in here.

Optometry.—Several measures pertaining to the practice of optometry have been introduced, and while the effort is presumably to strengthen the optometry law, at least one of the measures, and perhaps all of them, will likely interfere with the practice of medicine, and, if at all, quite disastrously. In short, and to save discussion, if these measures are enacted into law the licensed physician will not be allowed to fit glasses except he also takes the examination of the optometry board, thereby becoming, in effect and in fact, an optometrist. It is hard to believe that an intelligent optometrist would seek to do such a thing. We hope it was not intentional. Nothing of the sort would have been attempted when the old-timers, those whom we originally fought and subsequently with whom we fought, would have attempted no such thing. Indeed, and in our estimation, they will not now approve of anything of the sort. Needless to say, these measures will be opposed by our legislative committee.

Narcotics.—A measure intended to strengthen the state narcotic law, and place it more in line with the federal narcotic law, has been introduced by Senator George C. Moffett of Chillicothe. It is known as S. B. No. 70. The principal purpose of this measure is to inhibit the sale of preparations which have small amounts of opium or any of the objectionable narcotics, except upon regular narcotic prescription. There undoubtedly is a loose screw right there in our Texas law. The measure in question provides for just a bit more red tape than our legislative committee thinks is necessary, and an effort will be made to cut that to a minimum. It is extremely desirable that the state and federal narcotic laws be as nearly in accord one with the other as possible. It is true that our state law is not now being enforced by state authorities. The appropriation for the support of the narcotic service was vetoed by the Governor two years ago, and the department abolished. Even so, the law can still be enforced by any police officer, and it is useful to the federal narcotic people in that respect. Senator Moffett advises that he is agreeable to such modification of the measure as will meet the desires of the medical profession.

Naturopathy.—H. B. 324 provides for the legalization of the practice of naturopathy, whatever that is. According to the bill, naturopathy is as follows:

> "Diagnosis and practice of physiological, mechanical, and material sciences of healing as follows: The physiological and mechanical sciences such as the mechanotherapy, articular manipulation, corrective and orthopedic gymnatics, neurotherapy, psychotherapy, hydrotherapy, and mineral baths, electrotherapy, thermotherapy, phototherapy, chromotherapy, vibrotherapy, thalmotherapy, and dietetics, which shall include the use of foods of such biochemical tissue building products and cell salts as are found in the normal body; and the use of vegetal oils and dehydrated and pulverized fruits, seeds, barks, herbs, roots and vegetables uncompounded and used in their natural state."

Surely, no one who reads this can any longer be in doubt as to what naturopathy is. This definition is so inane and silly, that we feel assured that any legislator who reads it and gives it any thought, will laugh the thing out of court. At the same time, it would be well for our readers to write their legislators and express themselves in the premises. Constitutionally, there can be no such standard set up for the practice of medicine, and practically there is no need for any such system of practice. If necessary to go any further with the reasons for objecting to this legislation, it would be to turn over the serious responsibilities of the practice of medicine to people who are no better equipped than these people to minister to the sick and injured, and it would be an exceedingly dangerous thing from the standpoint of public health and public welfare.

Premarital Examination.—House Bill No. 79, by Representative Houston McMurray, et al, carries an amendment to the present law pertaining to physical examination precedent to marriage in this state. The copy of this measure which came to us first carried the imprint of the "David Hall Foundation, Dallas, Texas." Our readers will recall that this foundation as an organization is not so far recognized by the medical profession of the state as represented by the State Medical Association of Texas. It was referred to in an editorial in the December, 1940, number of the JOURNAL. The measure is what would have been expected from that source. It is wholly unnecessary and, we think, will not receive the favorable consideration of the legislature. The medical profession of the state, in coöperation with the State Health Department, is dealing with the venereal disease situation in accordance with the dictates of medical science, and of reason. This measure would tell the physician not only that he must make such an examination, but how he should make it, and what measures he should use in determining the existence of a disease which, according to the bill itself, would make marriage under the circumstances undesirable and all but prohibitive. The bill is not only not in accord with the latest teaching of scientific medicine, but sets up a procedure which would be highly distasteful to all concerned. The bill should not pass, and while we are not greatly concerned as a profession, we will oppose the same in the name and for the welfare of the unsuspecting and all too often misled public.

A Medical Service Plan is authorized by a measure introduced in the House by Representative Jeff D. Stinson and Fred Harris, of Dallas, et al (H. B. No. 701), and in the Senate by Senators W. C. Graves, Dallas, and Olan R. Van Zandt, Tioga (S. B. No. 249).

This is the enabling act which the House of Delegates at Dallas last May directed our legislative committee to prepare, to justify a plan of distributing medical service to certain groups, which our Council on Medical Economics was directed to prepare. The Executive Council approved a report of the Council on Medical Economics with regard to the matter which did not, as a matter of fact, set up a fixed plan but which did set up certain principles and certain boundary lines for the guidance of county medical societies in attempting anything of the sort. The bill in question was prepared by our General Attorneys, under the direction of our legislative committee, and it is believed that if enacted into law, any county society in the state may bring about an organization of physicians which will insure medical service for certain of our people, on a monthly prepayment basis, and without disturbing the personal relationship of physician and patient in any particular whatsoever, and without bringing into the picture any third party in that connection except of their own selection and devising, and that only for the purpose of distributing money collected on a prepayment basis for the purpose in hand. The sort of organization thus provided will not be under any obligation to furnish medical service for anybody. It merely promises to pay the doctor the participating patient employs his proportionate share of money collected for that purpose. The measure will not support a plan which involves any of the features of insurance except that of paying monthly premiums. Neither will the Act authorize the practice of medicine by a corporation. While corporations are to be set up, the individual physician will still do his own practicing, and be held responsible for any malpractice or what have you. The attempt is thus being made to absolve the physician from the personal responsibilities of those of his associates who join in the plan. In short, the Act in question would authorize a broad partnership, as broad as the practice of medicine in the communities concerned, without jeopardy under the law except to the individual for his sins of commission or omission, which is as it should be, and which is as it must be if the medical profession is to do what the public is said to want it to do in this respect.

Those of our members who desire the enactment of such a law should so advise their legislators, and we would pause long enough to say that while the medical profession of but a few counties in the state desire to set up such a plan at the present time, it may eventually be extremely desirable that every county in the state do something of the short, on a coöperative basis, to offset the movement towards socialized medicine.

We must again insist upon it that our readers get in touch with their Senators and Representatives at Austin with regard to the whole problem of medical and public health legislation, and advise them as to what is wanted and what is not wanted, and why. The secretary of the State Medical Association will take pleasure in explaining to any who may want to do something of the sort, and who may not know the answers, just what the situation is, and what factors of public health or medical interests are involved.

Plan For Procurement of Physicians for Military Service.—The Adjutant General of the Army has set up plans for the procurement of physicians for service with the Army, and hereafter it will so be done. The plans are in line with the resolution adopted by the House of Delegates of the American Medical Association last year, at the instance of the Surgeon General of the Army, and in accord also with tentative plans set up by the Board of Trustees of the A. M. A. It is upon this plan that the now much publicized medical preparedness questionnaire was based. A perusal of the plan will disclose why there has been so much insistence that every doctor in the county accomplish one of these questionnaires.

It will be noted, particularly, that the pool of physicians available for military service in the several fields of the practice of medicine is made up entirely of those who are willing to serve, and in the capacity in which they are willing to serve. This should set at rest any agitation over the likelihood that the government is planning to draft physicians into the military service whether or not they are willing to serve. It is also encouraging to those of us who, since the other world-wide unpleasantness, have been hoping that the army would eventually come to the very sensible conclusion that it might as well use doctors in its service in accordance with their special training, qualifications and desires. It may be that eventually we will find the round peg doctors fitted into round holes and the square peg doctors fitted into square holes.

The plan mentioned is embodied in the following instructions, recently sent to all concerned:

1. The following plan has been approved and will be placed in operation at such time as the War Department may direct.

(a) The American Medical Association will prepare and maintain a roster of civilian physicians, classified as to professional specialties and proficiency, who have agreed to accept commissions in the Army of the United States when needed for immediate active duty during a national emergency.

(b) The Surgeon General will designate one or more medical officers of the Regular Army who will be placed on duty at Headquarters, Sixth Corps Area, as representatives of his office in all matters pertaining to the Medical Corps Reserve and the American Medical Association.

(c) Corps area commanders will report, at times specified by the War Department, the number of medical Corps Reserve officers under their assignment jurisdiction who are available for active duty.

(d) Vacancies in allotments made to any corps area by the War Department that cannot be filled by the detail of a qualified Reserve officer under the assignment jurisdiction of the corps area commander will be promptly reported to the War Department, which will cause them to be filled from Medical Corps reserve officers in the Army and Service Assignment group, or by adding these vacancies to the allotment of other corps areas having a surplus.

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(e) If no qualified Reserve officer can be found, the Surgeon General will notify his representative at Headquarters, Sixth Corps Area, as to the qualifications desired and the location and grade of the vacancy. The representative will then secure recommendations from the American Medical Association and forward all information to the appropriate corps area commander, notifying the War Department of the action taken. The corps area commander will immediately cause the candidate to be given a physical examination and, if found qualified, will secure from the applicant a properly completed application for commission (W. D., A. G. O. form 170). All papers will then be forwarded to the Adjutant General for final action by means of air mail and "Immediate Action" stationery when necessary.

(f) Corps area commanders are not authorized to grant waivers for physical defects in these instances but may reject a candidate when found physically disqualified, notifying the Adjutant General of the action taken.

(g) On receipt of a properly executed oath of office, the corps area commander will cause orders to be issued placing the appointee on immediate active duty.

(h) No appointments will be made under this authority of applicants over 55 years of age.

(i) The appearance of the candidate before an examining board as prescribed in AR 140-5 will be waived in these cases.

2. The Surgeon General and corps area and department commanders will complete all arrangements necessary to place the plan in operation without delay when directed by the War Department.

IMPORTANCE OF ADEQUATE RIBOFLAVIN

An adequate supply of riboflavin, also called vitamin B_2, in later life will not compensate for a deficiency in childhood, *Hygeia, The Health Magazine* for February warns.

Milk is the richest source of riboflavin. It is also abundantly present in those plant and animal tissues in which the most active chemical changes take place, such as the leafy and germ portions of plants and the liver, kidney and heart organs. The name riboflavin indicates that the vitamin contains a sugar called ribose and flavin, a yellow pigment containing nitrogen.

"Symptoms of riboflavin deficiency," *Hygeia* says, "are collectively designated 'ariboflavinosis' and are characterized by a 'cheilosis' or inflammation and scaling around the corners of the mouth, a condition called 'poor man's mouth' in some sections of the country, lesions around the nose and eyes and functional disturbances of the eye.

"Riboflavin is destroyed by strong sunlight. A practical application of this fact for city dwellers is to make sure that the milk, delivered early in the morning, is not left standing for a long period of time in the bright rays of the sun. Milk should be refrigerated as soon as possible after it is delivered."

VISION IN THE SCHOOL ROOM

Because of the intensive visual work done in the classroom, it is imperative that the physical arrangements of schools have provisions for safeguarding the sight of the pupils, Constance J. Foster, Great Neck, N. Y., states in *Hygeia, The Health Magazine.*

"The more exacting the eye work, as in drawing and seeing classes, the more illumination is required for ease of seeing," she says. "Adjustable tilt-top desks help to bring work to the proper angle of vision. The desk should be high enough to prevent stooping or slumping. Work held 13 to 15 inches from the bridge of the nose is easiest on the eyes."

THE DIAGNOSIS AND MANAGEMENT OF CANCER OF THE BREAST*

ARTHUR C. CHRISTIE, M. D.
(Professor of Clinical Radiology, Georgetown University Medical School)
WASHINGTON, D. C.

In the year 1939 in the registration area of the United States there were approximately 150,000 deaths from cancer. Of that number about 15,000 were deaths due to cancer of the breast.

During the past few years much evidence has been brought forward to prove that cancer in general, and cancer of the breast in particular, has steadily increased in incidence. This may be due only to the increasing average age of the population and to better diagnosis. It is my belief that the higher average age of our population is responsible for most of the actual increase in cancer. There are statistical studies to show that there has been no increase in percentage of cases of cancer in comparable age groups. But a disease that causes over 15,000 deaths per year must be viewed with serious concern and every means possible must be made effective to reduce its mortality.

It is fully recognized that cancer of the breast can be cured in a high percentage of patients if treated while it is still localized in the breast. This brings us at once to the necessity for the early recognition of the disease.

The campaign that has been carried on in recent years to educate the laity to consult a physician when any signs of cancer are present has been of undoubted value. The fact that women are reporting earlier than was formerly the case with cancer of the breast has not only increased the chances of cure but has also increased the difficulties of diagnosis and has added greatly to the responsibility of the physician.

The diagnosis of breast cancer is usually not difficult in moderately advanced or far advanced cases. The presence of a tumor which is hard and fixed to the skin or underlying tissues, which has caused a shiny atrophy or ulceration of the skin or which has produced that appearance described as "pig skin" or "peau d'orange"; or an entire breast which is small and hard and fixed to the chest wall, with or without palpable axillary glands; all of these are signs so definite of cancer of the breast that mistake is not likely.

When the disease is less well-developed, difficulties begin to arise. The patient usually reports to the physician because she has had pain in the breast or because she has dis-

*Address delivered before a General Meeting, State Medical Association of Texas, Dallas, May 16, 1940.

covered a lump. Pain is variable in cancer of the breast and is of little importance as a diagnostic sign. In a small percentage of cases the patient will come because she has developed a serous or bloody discharge from the nipple. In many of these cases the discharge is due to the presence of duct papilloma, but in about half of those in which the discharge is bloody, cancer is present.

Inspection with the patient seated upright facing the examiner may reveal the fact that the affected breast is drawn upward to a slightly higher level than the unaffected one and is slightly flattened in the region of the areola and nipple and may be somewhat larger than the normal breast; there may be slight or marked dimpling of the skin directly over the tumor, and the nipple may be retracted slightly or so much that it is well below the level of the skin. This retraction of the nipple may be present even though the tumor is small and located at a considerable distance from the nipple. It is not an infallible sign since it may occur in mastitis and other conditions. The connection of the tumor with the skin may be verified by gently picking up the skin over the tumor between the thumb and finger and making slight traction; fixation of the nipple may be demonstrated in the same way. Attachment to the skin may also be demonstrated by having the patient extend her arms above her head.

Palpation in both the upright and supine positions should be done carefully and lightly in order to avoid expression of tumor cells into the lymphatics. The importance of gentleness in palpation should be kept in mind. Rough or prolonged palpation of a breast or its lymphatic drainage area when a cancer is present may do irreparable damage. In cancer, palpation reveals a tumor which is usually hard and even if not fixed to the skin or chest wall, is not definitely demarcated and seems to shade off into the surrounding breast structure. The tumor is located more often in the lateral half than elsewhere but may be found anywhere in the breast. In this connection it must be remembered that the breast sometimes extends mesially and that the tumor may be located directly over the sternum, or that it may extend laterally and the tumor be located well out in the axilla beyond the border of the great pectoral muscle. A fairly common location of cancer is at the lowermost margin of the breast at its junction with the chest wall. In such a location the scirrhus type of cancer may be overlooked for many years by the patient herself and missed by an otherwise careful physical examination. Such carcinomas although slow of growth are prone to distant metastasis and often are discovered only after it is found that the patient has metastasis to the bones or lungs. Upon examination such a tumor may be felt as a band-like thickening at the junction of breast and chest wall. When the breast is elevated, the skin is usually wrinkled or pitted directly over the tumor. Another type of tumor which is often found in the axillary fold of the breast is the "sweat gland carcinoma." Early fixation and involvement of the skin is characteristic of this tumor.

The differential diagnosis between cancer on the one hand and benign tumors, cysts, papillomas and chronic mastitis, on the other hand, offers difficulties.

When single cysts are superficially located, fluctuation may be demonstrated, or they may be easily aspirated through a small needle, and cancer thus excluded. If, on the other hand, they are deeply located, palpation may be of no value, and although some recommend aspiration, I feel that it offers possible dangers, such as infection and the danger of disseminating malignant cells, which should be avoided. In such cases transillumination may aid in the diagnosis. By transilluminating the breast with a suitable light, solid tumors will cast a dense shadow while cysts with clear fluid will cast no shadow at all. The method is limited in value by the fact that it does not differentiate between benign and malignant tumors and that bloody fluid in a cyst will cause it to transilluminate dark. The method is of real value, however, to identify or rule out a cyst containing clear fluid.

Papilloma is a fairly common tumor of the breast. It often occurs as a rounded, movable tumor immediately beneath the nipple and is accompanied by a serous or bloody discharge. It may also be multiple, arising in the ducts or acini or in the walls of cysts. It is often impossible in these cases to completely exclude cancer as a possibility.

So-called chronic mastitis is another disease which offers difficulties in ruling out cancer. This disease usually involves both breasts and usually manifests itself by pain, especially at the menstrual periods, serous or bloody discharge from the nipple and by the presence of a lump or lumps. On palpation the entire breast may be lumpy and many nodules may be felt. The greatest difficulty arises from the fact that in a lumpy breast a single one of the nodules may be a cancer and may be clinically indistinguishable from the rest. The cysts that occur in chronic cystic mastitis are often of the so-called "blue-domed" type. These are usually inno-

cent growths but occasionally carcinoma develops within them.

Paget's disease of the nipple is a condition the exact nature of which is still subject to discussion. Some look upon it as a precancerous disease of the skin which often terminates in epidermoid cancer; others regard it as an epithelioma which may in certain cases invade the breast; while still others believe that it is a true duct carcinoma secondarily involving the skin.

Clinically, at least, there appear to be two types of Paget's disease. The one is a very slow process which may last for many years and which is confined to the skin. It does not involve the breast structure and does not metastasize. It can usually be cured by proper irradiation. The other type is a true duct carcinoma which rapidly invades the skin and which metastasizes very early. It is a serious form of the disease and is likely to be fatal whatever form of treatment is adopted.

There remains to mention as a diagnostic problem the type of breast cancer called by Ewing "acute carcinosis." It is characterized by its rapid involvement of the entire breast and by signs of inflammation, redness of the skin, heat and pain. One can usually recognize it as cancer by the uniform hardness of the entire breast and by the small, hard carcinomatous nodules, red in color, which often occur in the skin surrounding or overlying the breast.

Little more need be said to emphasize the difficulties of diagnosis in cancer of the breast. Stout calls attention to a study by MacCarty of the accuracy of clinical diagnosis of cancer of the breast in 2,100 cases at the Mayo Clinic. A positive diagnosis was made in 78.5 per cent and a doubtful diagnosis in 21.5 per cent. The positive diagnosis was correct in 94.5 per cent and the doubtful diagnosis in 62.8 per cent. In other words when the clinician felt positive of the presence of cancer, he was wrong in one out of twenty cases and when he felt reasonably sure that cancer was present but was doubtful about it, he was wrong in considerably over a third of the cases. When a positive diagnosis of no cancer was made, it was correct in 88.8 per cent and wrong in 11.2 per cent. Stout points out that if there is such a high percentage of error among men of vast experience, it must be considerably higher among the general run of physicians who see only a small number of cases. The following points, then, should be emphasized in the diagnosis of breast cancer:

(1) Late cases with a large tumor or general involvement of the breast, with attachment to the skin or ulceration, or with fixation to the chest wall, with axillary gland involvement or more distant metastases, offer little difficulty in diagnosis.

(2) Moderately large or even small tumors which show evidence of skin involvement or retraction of the nipple, which transilluminate dark and which give evidence of their invasive character by palpation or roentgenography can be diagnosed correctly as cancer in the majority of cases.

(3) Small tumors which are movable, which are not attached to the skin and which are not accompanied by enlarged axillary nodes, offer great difficulty in diagnosis. If they transilluminate clear, a diagnosis of a simple cyst is usually justified but even clinicians of considerable experience make mistaken diagnoses in these cases both on the positive and the negative side.

(4) Chronic cystic mastitis, or more accurately "multiple cystic disease," can usually be diagnosed because of the irregular, lumpy character of the breasts and the bilateral involvement, but one cannot be sure in such cases that a small cancer is not present somewhere in the breast.

(5) Serous or bloody discharge from the nipple is often present in chronic cystic mastitis and is a common symptom in papilloma but the fact that cancer is present in about half of those in which the discharge is bloody must put the diagnostician on guard when this symptom is present.

(6) It is apparent that the greatest difficulties and uncertainties of diagnosis occur in the early cases when treatment can be of the greatest value. A method which has been advocated by some is the aspiration, or punch biopsy. The advantages claimed for it are that it not only enables the pathologist to distinguish between a malignant and benign growth but that it also gives valuable information of the type of malignant growth present—whether it is well differentiated or of highly cellular character. The objections to the method are, first, that it necessarily traumatizes the tumor and if the tumor is a cancer of anaplastic type may lead to immediate dissemination; and second, that the needle or punch may miss the actual cancerous area and give a negative result when cancer is actually present, or that there may be two or more tumors, only one of which is cancer.

A more valuable and much safer method to assist in early diagnosis is the use of a relatively small dose of x-rays over the breast —about 1,500 *r*'s applied in five or six days. If the tumor is a radio-sensitive cancer, that is, a highly cellular one and therefore very malignant, it will become reduced in size or may disappear completely within ten days or

two weeks. If it remains stationary in size we can be sure that we are dealing with a benign growth or with a cancer which is radio-resistant and less malignant in character.

TREATMENT

The possibility of mistake in diagnosis of cancer of the breast must always be kept in mind when we come to decide upon the treatment to be instituted.

If the problems of diagnosis of cancer of the breast are difficult, those of treatment are even more so.

In spite of widespread and persistent efforts to educate the public to the necessity of early recognition of lesions in the breast, thousands of patients still consult the doctor only when the disease is well advanced, and it must be admitted that many patients still fail to receive the prompt and energetic attention that they should have after they place themselves in the physician's hands.

The principal efforts in prophylaxis of breast cancer are to be directed toward avoidance of chronic irritation and the treatment of those conditions which are now recognized as predisposing to cancer. Probably the most important of these is chronic cystic disease. When definite tumor formation can be demonstrated in a case of chronic cystic disease by palpation, transillumination and roentgenography the patient should be given roentgen therapy in the same dosage which one would use for cancer and which I shall described later. Following the course of roentgen therapy the breast should be resected, the extent of the operation to be determined by gross inspection and the result of frozen section examination. Some have advocated removal of the breast or breasts in all cases of chronic cystic disease. There is much to recommend this course in women approaching or past the menopause. It means only the removal of a non-functioning organ, one in which cancer may already be present but concealed by the general disease, or in which cancer is likely to develop subsequently. In younger women the problem must be approached more conservatively and every effort put forth to make an accurate diagnosis. Simple cyst and papilloma should be dealt with in the same way as cystic disease, that is, preliminary roentgen therapy followed by resection and determination of the nature of the growth at the time of operation.

I come now to the treatment of cancer of the breast when the diagnosis has been made with reasonable certainty.

About forty-five years have passed since Halsted introduced the radical operation for cancer of the breast. During that time the technical details of the operation have been gradually perfected. That the technical perfection of the operation has reached a point beyond which there seems little prospect of improvement is demonstrated by statistics which show that the percentage of five-year survivals during the second twenty years of the Halsted period was essentially the same as that for the first twenty years. The mortality rate of the radical operation is about as low as we can expect to reach, namely 1.5 to 3 per cent in the best hands and somewhat higher as an average.

Statistics are now available to show what surgery can accomplish in cancer of the breast. In the best clinics in this country and Europe the radical operation effects clinical cures in 65 to 70 per cent of very early cases in which there is no evidence of extension beyond the breast and in which there is no skin involvement or deep fixation. It would seem that the percentage of cures in such cases should be much higher than it is since the disease is apparently still localized in the breast. Unfortunately, cancer may disseminate itself through the lymphatics or even through the blood stream long before there is any clinical evidence of such extension. It is known, for instance, that a considerable percentage of cases, especially if the tumor is located in the mesial portion of the breast, metastasize directly into the mediastinum along the lymphatics which accompany the perforating branches of the internal mammary artery. Metastasis may also take place through the deep fascia directly to the liver and the peritoneum. There are cases in which the lymphatics of the breast drain directly into supraclavicular nodes and others in which there is lymphatic connection with the opposite breast and even with the opposite axilla. In all of these cases the futility of dissecting out the axillary structures and removing the pectoral muscles is apparent. Careful search for distant dissemination should be made in every case before treatment is decided upon.

When there is definite clinical evidence of involvement of the axillary glands the percentage of cures immediately drops to somewhere between 4.5 and 16 per cent depending upon numerous factors which may be present.

When the supraclavicular or cervical glands are involved the percentage of cures is so small as to be negligible. The percentage of cures of all patients operated upon varies in different hands from about 20 per cent to about 35 per cent. The varying percentages of different surgeons is in all probability due to the criteria of operability accepted by different men.

When the cases which are inoperable by any reasonable standards are added to this showing it means that not more than 20 to 25 per cent of all cases of cancer of the breast can hope for cure by the best surgery of our day. This is not to decry the good results that have been obtained in the saving of lives by operation but it serves to emphasize the necessity for devising means to cure at least some of that 75 per cent which cannot be saved by surgery.

Radiation in the treatment of cancer of the breast has been confined until recently to postoperative and inoperable cases. Experience in the treatment of such cases is very large but it is only in recent years that dosage has been sufficiently standardized to render statistics from different sources reliable and comparable.

Notwithstanding the fact that we recognize the inadequacy of our dosage in past years there is good statistical evidence that postoperative irradiation has made a material contribution to the cure of breast cancer. Its results may be fairly judged by statistical tables presented by E. K. Dawson and Margaret C. Tod in the *Edinburgh Medical Journal* for September, 1933. In these tables are shown the results of radical operation alone and of radical operation followed by irradiation, the material being drawn from twenty-three authors representing clinics in England, on the Continent and in America. The number of five-year survivals in those with radical operation alone was 34.3 per cent; in those with the addition of postoperative irradiation it was 44 per cent, an increase of nearly ten in each hundred patients. Portmann at the Cleveland Clinic has arrived at about the same percentages in his analysis of cases treated by him in that clinic.

But we are not confined to postoperative results to demonstrate beyond a doubt the value of irradiation in cancer of the breast. The excellent results obtained in inoperable cases of breast cancer furnish convincing proof of the beneficial effects of irradiation therapy. Many patients in otherwise hopeless cases are rendered comfortable, their lives prolonged, and in many elderly women the disease so controlled that they live out their natural life expectancy with little or no discomfort from the disease.

The results obtained in irradiation of patients operated on and in those hopelessly inoperable has led to persistent efforts to increase the percentage of cures by improvement in methods of radiation.

It has long been recognized that traumatization of a cancer is dangerous. Even the manipulation consequent upon examination should be accomplished with the greatest care. I have abandoned the use of radium needles because I learned by experience that cancer could be disseminated even by such slight trauma. The danger of relying upon postoperative irradiation therapy alone lies in the fact that if the cancer has not been entirely removed with all of its extensions into the lymph channels and glands we are then dealing with a cancer traumatized by the operation and much more likely to metastasize to distant parts than was the original tumor.

These considerations finally led many to adopt preoperative irradiation as the method of choice in treatment of cancer of the breast.

In my own practice I have adopted the following general principles and methods:

(1) The initial treatment in all cases of suspected breast cancer should be a course of roentgen irradiation over the breast and axillary region, using two overlapping fields and giving a total of 2,500 to 3,000 *r*'s through 2 mm. copper filter at 220 kilovolts, spread over a period of twelve to fourteen days.

(2) If the tumor is inoperable because of fixation, extensive glandular or skin involvement, the presence of systemic disease, the age of the patient, or the type of the cancer, the subsequent treatment will depend upon the condition present six to eight weeks after the completion of the roentgen treatment. If the disease is far advanced, the palliation resulting from the initial treatment may be all that can be accomplished. In other cases it is often possible to destroy localized nodules by an additional dose of x-rays over a small area and to clear up small ulcerations by electrocoagulation. Much can be accomplished in seemingly hopeless cases for the comfort of the patient and the prolongation of life.

(3) For operable breast cancers I make no exception to my first statement that the initial treatment in all cases of suspected breast cancer is a course of roentgen irradiation. Preoperative irradiation is, in my opinion, a real advance in the treatment of this disease. The logical time for operation is about six weeks after completion of the series of treatments. Nothing but good is accomplished by this delay. The emergency nature of the operation on cancer of the breast has undoubtedly been exaggerated. The destruction and devitalization of cancer cells due to radiation must greatly lessen the liability of dissemination of the disease at the time of operation and may introduce an element of safety which is vital. When the roentgen treatment is administered in the dosage suggested and by the fractionated method the injury to normal structures is not such as to

create any difficulties or untoward complications at or subsequent to operation, if the operation is delayed until the skin has healed.

Attention is being directed more and more to the question of operability, to be decided in each individual case. In the great cancer clinics, notably Radium-Hemmet at Stockholm, the criteria of operability are being revised and the tendency is toward more conservative methods. A recent paper read by U. V. Portmann of the Cleveland Clinic contains the following statement on operability.

"It has been shown by the statistics presented that 54 per cent of all cases are incurable (Group 3). If surgeons would not operate upon such cases, they could boast of at least 60 per cent of five-year survivals from surgical procedures. The clinical manifestations of incurability should be carefully sought for and recognized. Patients with them should not be subjected to radical operations but should be treated by roentgen rays and radium alone, according to individual indications."

These indications of incurability and therefore contraindications to the radical operation as given by Portmann may be summarized as follows: Skin involvement manifested by fixation, edema, brawny induration, inflammation, ulceration or the presence of secondary nodules; edema, diffuse infiltration or fixation of the breast to the chest wall; fixed or numerous axillary nodes, supraclavicular nodes or distant metastases. Coming from a large surgical clinic and based upon a careful statistical study of comparative results of surgery alone with surgery combined with radiation therapy, Portmann's recommendations must be given weight.

There are a few other considerations besides those given by Portmann which are important when deciding upon the operability of individual cases of cancer of the breast. One of the most important of these is the age of the patient. The almost certain fatal outcome of cancer of the breast in young women is well known, and in the aged operation can add little or nothing to life expectancy. It is now the practice in some of the largest cancer clinics to use only palliative treatment by means of radiation or surgery or both in each of these age groups. This means not only that radical operation is abandoned in these cases but that attempts to cure by large doses of radiation are also avoided as useless and even harmful.

Another type of case which should be placed in the inoperable class so far as the radical operation is concerned is that in which the tumor rapidly disappears under moderate dose of roentgen radiation. The tumors disappear rapidly because they are of the highly cellular type and because of their cellular structure they metastasize very early. Operation in such cases will quite certainly shorten life rather than lengthen it.

What can we learn, then, to guide our future course from the experience of the past forty-five years in the treatment of cancer of the breast—a period which covers the time of the radical operation and radiation treatment?

First, it seems to be clearly demonstrated that we can add a considerable percentage to the number of five-year survivals by a careful combination of radiation therapy with surgery.

Second, that conservatism in the choice of cases for operation will help to reduce the total mortality from cancer of the breast. It will accomplish this end by inducing women to come earlier to operation because of the greater percentage of cures among those operated upon and the less mutilating type of operation necessary.

Third, we have learned that much can be accomplished by radiation therapy and minor surgical procedures in many cases of cancer of the breast which by properly revised standards should be considered inoperable. By such measures we can add a considerable number to the five-year survivals, especially among elderly people.

Fourth, it is now widely accepted that roentgen castration should be a routine procedure in all women who have cancer of the breast and who have not passed the menopause. Pregnancy is especially dangerous and must be avoided.

Fifth, it is recognized by all who are experienced in the treatment of cancer that the general management of the cancer patient is of vital importance. It requires the full cooperation of the general practitioner, the surgeon, and the radiologist.

Finally, it seems clear that we cannot rest content with the 20 to 25 per cent of cures effected in cancer of the breast by means of the radical operation. This percentage can undoubtedly be improved upon materially if patients can be induced to report in much larger numbers as soon as anything is discovered wrong with the breast. As I have indicated before, it is my belief that this end will be greatly facilitated by more careful selection of cases for operation so that a much larger percentage of women are reporting themselves cured to their friends instead of exhibiting the results of an unsuccessful operation.

In addition to this, there is now no doubt in the minds of those with the greatest experience that roentgen irradiation in the preoperative period will improve the operative results by at least 10 per cent and possibly by 20 per cent. And lastly, there is a large field in which radiation can assure comfortable prolongation of life in those whose disease is

too advanced for any surgery, and an appreciable number of such patients who can be clinically cured.

1835 Eye Street, N. W.

ENDOMETRIOSIS*

HOLLAND M. TIGERT, M. D., F. A. C. S.
NASHVILLE, TENNESSEE

The importance of endometriosis as a serious pelvic disease giving rise to many incidences of great disability with highly diversified clinical manifestations, is not generally appreciated in routine treatment and operative work.

Endometriosis may be defined as a morbid growth of endometrial tissue in an abnormal location.

Endometrial tissue may invade the uterine musculature, fallopian tubes, ovaries, pelvic peritoneum, rectovaginal septum, bladder, various portions of the intestinal tract, the umbilicus, inguinal region, the vulva, vagina, thighs, laparotomy scars, etc., and has been grown experimentally in the chambers of the eye and in the lungs.

The term was first employed by Dr. John A. Sampson and used to indicate pathologic conditions arising from either misplaced uterine or tubal mucosa, although he realized that the term was not strictly correct in the latter. Among many names, too numerous to recount, used to denote this condition are mulleriosis and endometrioma; the former is not satisfactory because it implies an embryonic origin, and the latter is frequently used, although the lesion is not a true neoplasm.

In 1860 Von Rokintansky first described adenomyoma as a pathologic entity. In 1895 Von Recklinghausen published the results of his studies in connection with the etiology of adenomyoma, and evolved the famous wolffian body cell rest theory. Cullen, the most distinguished American authority on adenomyoma, working independently but contemporaneously with Von Recklinghausen, arrived at the conclusion that the glandular elements in these tumors came from müllerian rests, or were developed from, or connected with, the glands of the uterine mucosa. Opitz and R. Meyer concurred in this view. Others explained the subserosal adenomyoma of the uterus as a transformation of peritoneum into gland structure. Chief among these were Ivanoff, Ashchoff, L. Pick and Meyer. Halban advanced the theory of lymphatic permeation. Lockyer was a strong adherent to the mesonephric conception.

In 1921 Sampson published his monumental paper on endometriosis and discussed perforating hemorrhagic cysts of the ovary, also known as chocolate or implantation cysts. Prior to this several observers, Cullen among them, had described endometrium-like structures in ovarian stroma. Sampson asserted that,

> "Epithelial lesions of true peritoneal endometriosis are implantations arising from fragments of endometrial tissue (probably in some instances tubal), which have escaped into the peritoneal cavity. In most instances these fragments are derived solely from tissue escaping through the tubes during menstruation, and in others there is an additional or secondary source from ectopic endometrial foci in the pelvis which have reacted to mentruation."

Van Oettingen and Luden ascribed the origin of these tumors to the ovarian epithelium, and concluded that Sampson's theory was incorrect.

Many confusing theories have been advanced regarding the etiology of endometriosis, and a vast amount of the voluminous literature has been devoted to this phase of the subject. Recently many have come to believe that no single theory will explain all cases. Briefly stated the underlying theories are:

1. Implantation. (Sampson).
2. Serosal, which implies a metaplasia of the peritoneal mesothelium.
3. Developmental misplaced endometrial tissue.
4. Metastatic. (Halban).
5. Ovarian histogenesis through the germinal epithelium.

Sampson's implantation theory of the regurgitation of living endometrial cells through the tubes, lodging on the ovaries and pelvic peritoneum, is most generally accepted.

Metaplasia of the serosal epithelium is widely accepted. This could be the result of a hormonal influence.

Development from embryonic cell rests from the müllerian ducts or wolffian bodies, has a few adherents.

Transplantation endometriosis, which is generally accepted as an established clinical fact, consists of the appearance of endometrial tissue in operative wounds and in other locations, following operations on the pelvic generative organs.

Fortunately from this maze of uncertainty and conflicting views, certain definite entities emerge. Through the well known works of Cullen and others the histologic structure, physical signs and clinical behavior of adenomyoma of the uterus, has long been familiar to the profession and requires no special discussion. It is probably the best example of direct primary endometriosis. In passing it may be said that the endosalpinx may invade the tubal wall in a similar way.

*Address delivered before a Combined Sections Meeting, State Medical Association of Texas, Dallas, May 16, 1940.

Since May, 1921, when Dr. Sampson read his paper on "Chocolate Cysts of the Ovary" before the American Gynecological Society the attention of abdominal surgeons has been sharply challenged with reference to this type of hemorrhagic cysts. Regardless of the histogenesis of these growths, it may be said that the clinical behavior is fairly well understood. Hemorrhagic cysts of the ovary are usually of small size, seldom being more than a few centimeters in diameter. Clinically the chief characteristics are the thick brown syrupy contents of the cysts (hence, the name "Chocolate Cysts"), the extraordinary density of the adhesions, lack of evidence of pelvic infection from the usual causes, with the presence of indurated areas and nodules beneath the peritoneum of the cul de sac, or in the wall of the rectum or sigmoid.

Endometrial transplants usually appear in laparotomy scars a few weeks or months after operation; they may remain latent and not appear for several years. As a rule, the nodules swell and are painful during menstruation, and for several days thereafter. They are tender to pressure at all times. They have the feel of a small omental hernia and later become raised above the skin and have a bluish cast. Retrodisplacement of the uterus is often associated with endometriosis. It is difficult to state which is primary and which is secondary. In the absence of a history of infection, endometriosis should be suspected. The symptoms naturally depend on the location and extent of the disease. The course is not infrequently like chronic pelvic inflammation and the diagnosis is only made at operation. The age incidence is usually between 30 and 50 years. Dyspareunia and dysmenorrhea are common complaints.

It is contended that the frequency of endometriosis is not generally appreciated by surgeons, because many of the lesions are small and not looked for. Sampson, who constantly searches for them, encountered the condition in ninety-eight out of 332 operations for pelvic disease in one year. In another series, extending over one year, in 296 abdominal operations for pelvic conditions, endometrial implants on the surface of various structures in the pelvis were encountered sixty-four times.

The frequency with which endometriosis is encountered depends largely upon the experience of the surgeon and his appreciation of the pathologic condition. It may be assumed to be observed by the average operator in from 6 per cent to 8 per cent of pelvic operations, although in 332 laparotomies Sampson reported endometrial implants in 29 per cent, and in 43 per cent of abdominal operations in patients between the ages of 30 and 50 years.

In typical cases of peritoneal endometriosis the preoperative diagnosis can sometimes be made. The condition is suggested by the presence of adherent masses and nodules in the pelvis, the age of the patient, dysmenorrhea, sterility, and exclusion of the usual causes of pelvic inflammation. Primary sterility is present in 35 per cent. Menorrhagia is present in early cases and eventually metrorrhagia supervenes. In some cases rectal and vaginal symptoms develop, depending upon the invasion of these structures by the pathologic process. Dockery has observed that the usual cyclic changes in the endometrium occur synchronously in the implants, which strengthens the theory that implants are derived from normal endometrium. Pain is the most significant and constant symptom. At first it may be associated only with menstrual periods but eventually becomes more or less constant.

Certain prophylactic measures with reference to surgical technique have been suggested which are, perhaps, not without value. In passing it may be stated that the modern practice of insufflation of the oviducts for various purposes may be a source of danger. It should not be practiced near the menstrual period.

In the presence of extensive endometriosis involving the pelvis, radical removal of the internal generative organs is usually advocated. In certain types of cases, less severe and extensive, more conservative measures may be adopted. On this point Counseller in a recent editorial in *Surgery, Gynecology and Obstetrics* states,

> "A rather direct relationship has been noted between the degree of cystic hyperplasia of the endometrium and the extent of the endometriosis. If cystic hyperplasia of the endometrium denotes ovarian dysfunction or failure, then when cystic hyperplasia grade 3 or 4 is present and is associated with endometriosis clinically, the endometriosis may be assumed to be too extensive for conservative surgical treatment. Also, if the endometrium is nearly normal and there is clinical evidence of pelvic endometriosis, the chances of avoiding radical surgical measures are much greater. If observation of such relationships should be confirmed sufficiently often, it may become possible to determine from biopsy of the endometrium whether the ovary and uterus are rapidly becoming functionless. If such a condition is encountered, even though the patient is in the latter part of the third decade or early in the fourth decade, panhysterectomy is the procedure of choice. The power to reproduce is almost certainly gone and ability to bring about normal menses by substitution therapy is essentially nil."

In view of the known nature of endometriosis regardless of the origin, and the known effect of ovarian hormone on endometrial tissue, regressive changes might naturally be expected when the ovaries are re-

moved or rendered functionless by irradiation, or removed surgically. Clinically this does not always occur.

Since the activity of endometrial tissue is dependent upon ovarian secretions, generally, endometriomata may be expected to atrophy after the removal of the ovaries, or irradiation castration. This is the treatment of choice in very extensive cases in which radical operations carry great hazard and seriously mutilate the patient.

In milder cases, small endometrial transplants on the ovary and elsewhere may be excised. To prevent further implantation the tubes should be removed. It is important to carefully examine both ovaries, especially the under surfaces, and remove all transplants to prevent the possible development of ovarian hematomata and malignant ovarian tumors.

In young women one is justified in following conservative measures to preserve function, unless the pathologic process is very extensive. Some of these cases do surprisingly well. In women past 40, with marked endometriosis, radical operation with sacrifice of the ovaries is desirable.

706 Church Street.

HABITUAL ABORTION*

HERBERT BEAVERS, M. D.
FORT WORTH, TEXAS

Habitual abortion has been defined as two or more spontaneous abortions occurring in the same individual, in which no pathologic or serologic factor has been at fault. This automatically removes the cases in which there is a diagnosis of fibroids, of salpingitis, or of ovarian pathology, tuberculosis, syphilis, etc. Frankly, it leaves only the patient who presents herself with a sterility problem or one who comes in asking about the prospects of a normal pregnancy. Usually the latter has consulted many physicians and has been informed that she has an infantile uterus and no doubt she will never conceive, and should she conceive it will be unlikely that she carries to term. Taussig[13] states that the present time is an era of conservation and suggests that we exert our influences on armamentarium to conserve the pregnancy in this particular type of case.

It is in this group of healthy individuals who are anxious for offspring and who have inherited a hypoplastic genital set-up that I am particularly interested. The group as a whole present no pathologic changes and have no serologic problems. One spontaneous abortion in a primipara does not make that case eligible for consideration, as it may have been subject to the usual insult of a first pregnancy.

Shall we endeavor to challenge Mother Nature? Repeatedly one hears that it is all for the best if the symptoms of repeated and spontaneous abortion occur and to combat these symptoms with therapy leads to disappointment and grief. Huntington, Rock,[6] and others feel that in the majority of cases of abortion, the gestation is abnormal or the pregnancy has terminated when the symptoms appear. Shute[10] collected 443 cases in which therapy was instituted before or after pregnancy occurred and only 2 per cent expelled deformed fetuses. Kane's[7] series of forty cases includes four cases of abnormal fetuses, a spina bifida, an imperforate anus, a pyloric stenosis and a mongolian idiot. He further elaborates, that later three of these four mothers with adequate treatment delivered normal fetuses at term. Collins[4] reports thirty-six cases with treatment and had a mild case of hypospadias which required no treatment. And so through the literature, one can find that the incidence of the abnormal fetus does not warrant our first impression. To quote Collins,[4] no tenable argument can be held against any attempt to carry to term a woman who habitually aborts.

Admitting there are no pathologic or serologic factors involved in so-called cases of habitual abortion, what are we to consider the insulting factor? Litzenberg, King and others have conclusively shown a low basal state exists in a majority of the sterility cases and spontaneous abortion cases. Shute, Vozt-Muler, Watson, Bishop, Collins[4] and others have been impressed by the administration of vitamin E. Kane,[7] Browning, Venning,[2] Campbell, and Servinghaus[3] have demonstrated remarkable results with progesterone, or the active constituent of corpus luteum. All therapy is stressed for the improvement of the germ plasma of the cell and to improve the condition of an otherwise impaired decidual bed.

A basal metabolic reading of —10 to —20 is the usual finding in sterility cases. Few references have been found of basal metabolic readings in early pregnancy until King and Herring's[8] recent paper, in which in a series of 150 they found 40.6 per cent having a low basal rate. It has been known the basal metabolic rate will increase with the progress of pregnancy from a low normal minus to a plus 8 or 10 at the end of pregnancy. Baer and Cornell[1] noted a 25 to 35 per cent increase at term due to an increased mass of active protoplasmic tissue chiefly fetal. The relationship between low basal metabolic rate and sterility and a low basal metabolic rate and abortion have been well established.

*Read before the Section on Obstetrics and Gynecology, State Medical Association of Texas, Dallas, May, 15, 1940.

Litzenberg[9] states 45 per cent of his sterile patients have low basal rates and found if the treatment was not adequate, abortion follows the conception. The cells of the gonads, male and female, are susceptible to deleterious influences and a fusion of such an impaired sperm or impaired ova will give an impaired embryo which does not develop. The hypothyroid state also accounts for the increase in cholesterol with corresponding changes in the placenta which terminate in abortion or toxemia. Thus we find the thyroid affects the germ plasm as well as the decidual bed.

Investigations have shown that a deficiency in vitamin E results in pathologic development of the embryo and embryonic contributions to the placenta but no pathologic change in the uterus or endometrium. These changes prevent successful implantation of the ovum. If in experimental animals, the vitamin E is administered a few hours before implantation of the ovum, a normal implantation occurs. Shute[2] firmly believes the beneficial results of vitamin E are due to the neutralization of all anti-proteolytic ferments in the blood and that vitamin E is anti-estrogenic. Collin's[4] recent analysis of twelve cases of habitual abortion treated with vitamin E with nine normal full term pregnancies merits consideration. Following Shute's[4] routine of using the cold pressed type of wheat germ oil, Collins[4] gave a maintenance dose of from one to one and one-half drams unless symptoms of threatened abortion occurred. Eight to twelve drams were then given during the first twenty-four hours and then a maintenance dose was continued until the thirty-second to thirty-fourth week of pregnancy. Three of his patients voluntarily stopped their therapy with resulting symptoms of threatening abortion. Upon instituting vitamin E therapy again, the symptoms subsided and the patients continued their pregnancies to the expected time. Watson and Tew[14] using liquid wheat germ oil and also capsules of 1 cc., average dose from 3 to 6 cc. per day for maintenance, reported fifteen normal pregnancies in eighteen cases of habitual abortions. Their results correspond to that of Vogt-Muler, Collins, and Shute. So far no reliable chemical test is available for the determination of antiproteolytic power of blood serum.

Progesterone is the active product of corpus luteum and is one of the most important factors in assuring a normal implantation of the ovum. It also exerts anti-estrogenic influences throughout pregnancy. Hirst as early as 1918 recognized the value of corpus luteum in the treatment of abortion. Only recently, Falls[5] found that 1 cc. of watery solution of corpus luteum contained 1/10 rat unit of progesterone, which is contrary to the general belief. It is consoling to think that one has not administered ampule after ampule of corpus luteum in the past without producing some beneficial results either to protect a pregnancy, or prevent an abortion, or improve the state of hyperemesis.

The present conception of the endocrine mechanism of early pregnancy will be briefly outlined. Browne, Henry and Venning,[2] using a test for sodium pregnandiol glucuronidate, so-called pregnandiol, which is an excretion product of corpus luteum, and within certain limitation a direct reflection of the amount of progesterone formed, found this product appearing twenty-four to thirty-six hours after ovulation. The average duration of this excretion is from ten to twelve days and the estimated amount excreted is between 45 and 55 mg. A shorter period of excretion would be abnormal as the prolan secretion could not be established to prolong the corpus luteum state. Prolan appears in the urine on the tenth to eleventh day after ovulation and reaches its maximum excretion fifty to sixty days later. The concentration drops notably about the one hundred and twentieth day, and a trace is maintained through the pregnancy. Estrogens were found to follow the usual course of the menstrual cycle through pregnancy. Zondek, Browne, Henry and Venning[2] found the estrogen peak occurring in the ninth month with excretion ranging from 15,000 to 45,000 units in twenty-four hours.

The embryologists agree that the ovum takes ten to twelve days to migrate down the tube and become implanted. During this stage the corpus luteum or progesterone is exerting its influence. Upon implantation of the ovum, the chorion becomes the source of prolan excretion, which is a definite anti-estrogenic factor. Should a shorter corpus luteum phase exist so that the effect of prolan could not be established, abortion would result. This is a speculative cause for some patients with sterility in whom no other cause for infertility can be detected. The corpus luteum of pregnancy begins to degenerate between 70 to 90 days, as we know, and in the majority of cases oöphorectomy produces no ill results upon the pregnancy. The progesterone becomes the excretion of the placenta at 70 to 90 days. A failure to produce progesterone and estrogen in the proportional ratio will eventually result in abortion. Browne, Henry and Venning[2] interpreted the rise in pregnandiol, which occurs about the seventieth to ninetieth day of pregnancy, as the beginning of secretion of progesterone by the placenta. It was erroneously believed that since the corpus

luteum degenerates in most instances by the third month and since the ovaries could be removed and pregnancy continue, progesterone was unnecessary in the latter part of pregnancy. The time of transfer of the formation site of progesterone from the ovary to the placenta varies in different individuals and also in pregnancies of the same individual. Should the corpus luteum phase be shortened or terminate before the placenta accepts its function of producing progesterone, an abortion occurs. Reviewing my experience I find the majority of spontaneous abortions have occurred about the transitional period, that is, at the time of transfer of production of progesterone from the ovary to the placenta, in the late second or third month.

The determination of prolan excretion in early pregnancy may eventually be as standard a clinical test as the basal metabolic rate. Theoretically, it would distinguish the patients in whom gestation is already degenerated and those in whom progesterone therapy may benefit. A low prolan determination in early pregnancy has indicated a degeneration of gestation. Again theoretically progesterone therapy should be beneficial in those cases in which the embryo and placenta develop to a certain period and the placenta fails to take over the production of progesterone in those cases in which the corpus luteum degenerates early. If the critical period can be tided over by progesterone therapy the placenta will eventually begin to function. The dosage of progesterone is not standard. Kane[7] has given from 1/25 to 1 rabbit unit; Falls[5] 1/10 in the form of corpus luteum; Campbell and Servinghaus[3] 1 to 2 mg., and some 5 mg. All agree that during the expected menstrual cycle, large doses should be given, from 1 to 5 mg. daily, if symptoms of abortion occur in the habitual abortion case.

In reviewing a series of cases of habitual abortion, I did not feel that I could present any clinical standard to distinguish one group from another. In the majority of cases, I was confronted with a sterility problem following two or three spontaneous abortions and in the case of each patient who became pregnant after treatment, I emptied the drug cabinet in her lap, so to speak, to keep her pregnant. All patients continued thyroid therapy of ¼ to 1 grain throughout pregnancy unless contraindicated. Antuitrin S was administered every other day or every third day until ninety to 120 days. If symptoms of cramps or bleeding occurred at irregular intervals or at the menstrual time, 1 mg. to 5 mg. of progesterone was administered daily until the symptoms subsided, and a maintenance doses of 1 to 2 mg. was given weekly until the 120th to 180th day. The investment of such an outlay is of minor importance to the prospective parents anxiously awaiting the offspring. Such a procedure is prohibitive for routine practice. Falls and Campbell[3] state that wheat germ oil has had no value in their non-fertility cases but I have used it empirically with thyroid. No one has proven that any harm has been done by the administration of vitamin E in sterility cases so I have routinely prescribed 2 to 3 cc. The vitamin E is continued through the 150th to 200th day and in some cases to term. Recently I have added the administration of vitamin K to the above armamentarium. In a most recent case, the symptom of bleeding was stopped within twenty-four hours and did not recur. Upon examination ten days later, a diagnosis of missed abortion was made, however. Singleton[11] has been impressed with his results with dehydrated young grasses in which vitamins A, C, and vitamin K have been found. This preparation of dehydrated young grasses is in an experimental stage, although Singleton[12] has published a paper showing its immediate and beneficial results in menorrhagia.

One must conclude that habitual abortion exhausts our patience and armamentarium in spite of all the new contributions of vitamins and endocrines. It is definitely shown that thyroid, antuitrin S, progesterone, wheat germ oil, and vitamin K are indicated in the treatment of these cases. Excepting thyroid and basal metabolic rate, we have no clinical test of value and we must be the sole judge as to the dosage advisable. Sedation in the form of barbiturates is preferable to small doses of morphine as the latter generally stimulates uterine contractions at the most inopportune time. Rest in bed is mentioned last but is the wisest, cheapest, and probably the safest of all methods of treatment.

CONCLUSIONS

Until standard tests have been established for prolan determinations, anti-proteolytic powers, etc., it would indeed be wise to institute a routine practice of giving:

1. Small doses of thyroid, one-fourth to one-half grain, even in cases with low basal readings.
2. Antuitrin S, 1 to 2 cc. weekly, until the placenta takes over the production of prolan.
3. Progesterone in cases of cramps and bleeding, plus administration of vitamin K or the dehydration grasses.
4. Wheat germ oil in 3 to 6 cc. or 1 to 2 drams doses as a maintenance dose, increasing the amount to 10 to 12 drams during

the active symptoms of abortion or miscarriage.

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1408 Pennsylvania.

ABSTRACT OF DISCUSSION

Dr. W. B. Reeves, Greenville: Dr. Beavers has presented something new, that is, most of this work has been done in the past decade. He has ruled out those conditions that we older practitioners have sought to deal with in the past, as being the logical cause of habitual abortion, namely, fibroid, salpingitis, ovarian pathology, tuberculosis and syphilis.

I will agree with the essayist that there are many healthy individuals who do not conceive, and many who spontaneously abort before the end of the third or fourth month. These we have known, but the remedy has been vague and obscure in most of our experiences.

It seems from reciting the investigations of a number of workers that we are coming into the light by way of endocrinology and vitamin therapy; progesterone, a corpus luteum derivative, and vitamin E, seem to be the answer. I have used corpus luteum for the past twenty-two years with seemingly good results in vomiting in pregnancy and threatened abortion, but did not know it contained the hormone progesterone that now is relieving this condition. I also agree that with a low basal metabolic rate, thyroid therapy would be an essential throughout pregnancy.

As reported, vitamin E or wheat germ oil has played an important role in the treatment of human reproductive disorders; in the main, habitual and threatened abortion, placenta praevia, toxemia of pregnancy and sterility. It is said that the earliest and most important sign of vitamin E deficiency is uterine tenderness at the placental site. Vitamin E is anti-estrogenic in action and its deficiency may be suspected by determining the estrogenic content of the blood according to the method of Shute.

Vitamin K, the anti-hemorrhagic factor, is less commonly known than vitamin E, because it has not yet received complete clinical recognition; further research is necessary to establish fully its prophylactic and therapeutic merit in the treatment of human ailments.

THE REPAIR OF CYSTOCELE, RECTOCELE AND PROLAPSE*

G. F. GOFF, M. D.
DALLAS, TEXAS

Any presentation of the subject of repair of cystocele, rectocele and prolapse must necessarily be in quite summary fashion in the short period of time allotted to me. I can conceive of nothing more boresome than to read through a mass of figures, statistics and details of operative procedures on this subject, which would necessarily have to be included in a formal paper for publication. Numerous standard textbooks are easily available to those who care to go into details.

My desire is to discuss briefly the most outstanding fundamental facts suggested by this subject, indicating cause, indications for operative repair, and suggestions as to how better operative results may be obtained.

For many years in the past and even up to the present time the major cause for the appearance of cystocele, rectocele and prolapse was laid at the feet of the obstetrician and was labeled poor obstetrics. No doubt this was a just accusation in many instances and probably still holds true to some extent today but it is probably far from being the only cause. There is no doubt that a certain percentage of difficult labors, which have to be terminated by difficult instrumental procedures, do constitute a real factor in the production of these conditions, but with the improvement in obstetrics that has come in the past few years by better teaching and better training, if injury from instrumental delivery were the sole cause there should be a greater reduction in the number of cystoceles, rectoceles and prolapse that we are still seeing today. Another very striking point is this: Those of us who have done any considerable amount of obstetrics know of a number of patients who have had extremely difficult labors that were terminated by difficult instrumental procedures, yet the patients recovered and showed practically no symptoms of cystocele, rectocele or prolapse. Again we have all seen patients delivered in such a fashion that we would call their labors a perfectly normal process yet when these women were examined postpartum they had definite cystocele, rectocele and prolapse. I am definitely convinced that in many women there is an inherent fundamental developmental defect in the development of the muscle and fascial structures that support the uterus and other generative organs, which makes it practically impossible for them to have a baby without sustaining major degrees of permanent disability from cysto-

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cele, rectocele and prolapse. It makes one feel that if there were any accurate way of labeling these patients before the time for delivery, it might be better in such instances to deliver their babies by cesarean section. I don't want to be misunderstood. I am not attempting to preach radicalism, but certainly a delivery of one or two children by cesarean section would be much better for these women than to go through the remainder of their lives, as many of them do, with constant pelvic pain and backache and partial incapacitation, even though a good operative result may have been obtained by some repair procedure.

Over a period of years I have watched particularly those women who have retroversion and border on infantile type of pelvic organs before their first pregnancy starts. Almost invariably these patients have a faulty development of the fascial and ligamentous structures supporting the top of the vagina and the uterus. It has been quite interesting to me to note that the great majority of these patients, who are seen for suspension operations after the first or second baby, will show uterosacral ligaments that are practically nothing more than thin folds of peritoneum which have been stretched to three or four times their normal length. A similar deficiency is often present in the round ligaments, though not to such a marked extent. Most of them will show the round ligament attached low down on the anterior surface of the uterus near the attachment of the bladder peritoneum, and the attachment is a thinned out, fan-shaped attachment which is of little use in trying to pull the uterus forward. Most of these patients who have had retroversion before the first baby will continue to have retroversion afterward regardless of what postnatal care is instituted, and pessaries and other palliative measures are only partially successful in relieving their discomforts. As examples of this group I should like to cite the cases of three sisters, one of whom had had two children, and on whom I repaired a cystocele, rectocele and second degree prolapse. The other two had never married or had a pregnancy, but near the time for menopause, both showed definite cystocele, rectocele and prolapse, with relaxation of the vaginal orifice almost as great as the sister on whom I did operative procedures. I am not attempting to excuse our blunders and poor obstetrical technique with their resultant relaxations, but I do feel that we should be less ready to criticise some other doctor for his apparent poor results in the handling of a previous pregnancy. I believe developmental defects of supporting structures play a large part in the later appearance of cystocele, rectocele and prolapse.

Cystocele.—The mere appearance of the anterior vaginal wall at the vaginal orifice with no other symptom present should never serve as an indication for an operative repair. Many factors may enter into the indications for operative repair but two or three things should serve as criteria, and at least one of these should be present before operative repair is justified. Certainly, incontinence with its unpleasantness and embarrassment constitutes justifiable reason for operative intervention. Retention of urine, with recurrent attacks of cystitis certainly is another very definite reason for repair of cystocele.

Rectocele.—Relaxed vaginal orifice and rectocele do not, as a rule, account for the typical bearing down discomfort and low backache ascribed to the female organs when these two conditions are not accompanied by the relaxation of the supports at the top of the vagina. The chief difficulties arising from relaxed vaginal orifice and rectocele might be described as the loss of constrictive and expulsive powers. When the vaginal orifice is enlarged as a result of childbirth the power of squeezing or attempting to close the orifice of the vagina is lost and naturally there is interference with normal contact during the sex act which definitely constitutes a factor of maladjustment in a fairly large group of individuals. When the rectovaginal septum has been thinned out by submucosal separation of the vaginal wall musculature there is a definite tendency for fecal material to collect in the lower rectum in fairly large quantities, and when bowel movement is attempted there is a tendency for this material to roll forward into the vagina rather than to be shaped and passed through the smaller sphincter area. Many women have noticed that they could press the posterior vaginal wall backward and expedite the passage of such firm fecal masses. Proper repair of a rectocele should give these women a wall to strain against in the final expulsive effort of defecation. It is impossible for me to conceive of a tube the size of a normal vagina before childbirth being stretched to the size necessary for the passage of an average size baby without sustaining marked tearing of its muscular walls. I have marveled many times at the apparent complete return to normal of the vagina after the birth of an unusually large baby.

Prolapse.—Prolapse is not the result of retroversion but it is definitely expedited and encouraged by the presence of retroversion. When the fascial and ligamentous structures about the cervix at the top of the vagina have

been defective in their development, naturally it will not take much trauma in the process of labor to stretch and tear them beyond any possibility of restoration by means other than surgery. When difficult instrumental delivery is necessitated there are probably always greater or lesser degrees of permanent damage to these structures. The bases of the broad ligaments and the so-called cardinal ligaments as well as the utero-sacral and utero-pubic attachments are all involved when prolapse is present. When the uterus lies in retroversion it is much easier for it to slide downward in the vaginal canal. The drag downward on supporting structures gives the exhaustion and fatigue which results in the so-called "bearing down" sensation and low pelvic backache. Correction of the prolapse and relief of these symptoms are not accomplished without attention to all of the relaxed supporting structures. Protrusion of the cervix to the vaginal orifice or hypertrophy of the cervix with protrusion through the vaginal orifice, together with prolapse of a portion of the vaginal wall may lead to excoriation and ulceration accompanied by discharge and bleeding. Prolapse interferes with normal circulation to the uterus, tubes and ovaries and as a result these organs are in a state of chronic congestion and low grade swelling, which may be contributory factors in the production of pain and excessive bleeding at the menstrual time. They certainly constitute an unhealthy state of nutrition for these organs.

Operative Repairs.—Before attempting any type of operative repair on any one of these three conditions, the surgeon should first realize that he is dealing with a type of hernia, and in a sense follow the accepted principles of hernia repair, in that he must realize that it is necessary to build in front of the hernial sac, a barrier strong enough to support the weight that is placed upon it. In order to accomplish this purpose, careful dissection with accurate identification of supporting structures is necessary. It is also imperative that good circulation to these structures is preserved, and as is always true, it is imperative that approximation and suturing together of supporting structures must be done in such a way as to make proper union possible without so much tension that circulation will be interfered with and lack of proper union result.

Cystocele.—The mere cutting away of an oval shaped portion of the anterior vaginal mucosa with suturing together of the resultant edges does not constitute a proper repair of cystocele in the light of our present knowledge of the anatomical defects. Many prominent names have been connected with operations devised for the repair of cystocele, rectocele and prolapse. I do not think it is as important to know the name of somebody's operation as it is to understand the principles involved in the anatomical reconstruction that presents itself. Many cystoceles can be satisfactorily corrected by any one of several different procedures but the practical points worth remembering are that it is necessary to open up the anterior vaginal wall from the cervix almost to the urethral orifice, laying back a flap of vaginal mucosa and musculature on either side in order that the bladder may be exposed. In the so-called partial advancement operation, described by Arthur Curtis of Chicago, the bladder attachments low down on the cervix are divided and the bladder wall is pushed upward and separated from the lower uterine segment to the level of the peritoneal reflection on the anterior surface of the uterus. The peritoneum is not entered. Some gynecologists then prefer to dissect the vaginal wall structures from the muscosal flap and lap them over each other in front of the bladder, suturing them high up on the anterior surface of the uterus from which the bladder has been removed and carrying the suturing on downward to the incision on the cervix, thus placing the bladder behind a muscular wall dam and at the same time shortening the utero-pubic attachments. A portion of the mucosal flaps is then trimmed and the edges are sutured together over the muscular repair. If incontinence is present, two, three or four mattress sutures of silk or small chromic catgut may be placed at the level of the bladder neck in order to constrict this region in the hope of regaining union of the sphincter fibers that have been separated by the injury. A small rubber catheter in the bladder during this procedure makes identification easier and injury less likely.

In combining repair of cystocele and prolapse by means of the Watkins interposition or transposition operation, a similar procedure to that just described is carried out, and in addition the peritoneum anterior to the uterus is entered and the fundus is pulled forward through this opening so that the bladder is placed above the fundus of the uterus. Of course, in doing this operation the uterus must be of a size that will readily come through the aperture and fit fairly well the space that it is to occupy along the anterior vaginal wall. Furthermore, there must be no pathologic changes in the uterus, such as polyps, fibroid tumors, etc., which would lead to later difficulties. Also, if the woman is still in the child-bearing age it is imperative that sterilization be done by division of the tubes with excision of the cornual portion of

each tube and complete closure of each uterine cornu. Where a tubal or ovarian pathologic condition is present, of course, this operation cannot be satisfactorily done. The peritoneum, at its opening along the bladder wall, should first be sutured along the upper posterior surface of the fundus of the uterus so that the peritoneal cavity is completely closed and the possibility of herniation is obviated. In suturing the fundus of the uterus in place under the bladder, I prefer not to anchor it into the periosteum of the pubic rami as described in the original procedure. My feeling is that it makes too much fixation and is conducive to pain. I anchor the fundus by means of interrupted sutures of chromic catgut to the lateral reflection of the vaginal wall a short distance anterior to the level of the neck of the bladder. I do not feel that it is necessary to dissect vaginal mucosa from vaginal musculature on each one of the lateral flaps. I prefer to trim off portions of these flaps sufficient to make closure possible without redundancy or undue tension. Interrupted sutures are placed through the vaginal mucosa and musculature flap on each side, bringing these together in the midline and at the same time including a bite into the anterior surface of the uterus. These sutures are carried backward to the level of the incision in the cervix, thus closing the anterior vaginal wall. In carrying out this procedure I always try to bring the fundus of the uterus forward toward the symphysis as much as possible in order to put a stretch on the uterosacral ligaments, thereby tending to lift the vaginal vault. Usually, some type of high amputation of the cervix should be combined with this procedure in order to remove the cervical projection and allow for smoothness at the top of the vagina. Furthermore, such a procedure gets rid of chronically infected cervical glands and old scars and lacerations.

Other types of procedures have been devised for correcting cystocele and prolapse, among them the so-called Manchester-Fothergill procedure with its variations. Richardson in Baltimore has devised a procedure which he has used in a small series of cases satisfactorily, in which he amputates the cervix and then proceeds as in the Watkins interposition operation; when the fundus of the uterus is brought forward through the peritoneal opening, he does a supravaginal hysterectomy, thus leaving a stump of the cervix at the level where the uterine arteries enter the uterus, and the fascial attachments to the cervix are normally located. By leaving these attachments intact he obviates the danger of not getting accurate union of these structures to the repaired vaginal vault. He then brings this stump forward and may, if the size justifies, interpose it in the same manner as if he were interposing the fundus of the uterus underneath the bladder. This procedure has the added advantage of preserving better circulation to the structures at the vaginal vault than is possible by complete vaginal hysterectomy.

Several years ago, Everett of Baltimore, made a very exhaustive study of the patients operated on in the gynecological department at the Johns Hopkins hospital over a period of many years by various members of the visiting and resident staff. His desire was to compare the end results obtained by various procedures in attempts to correct cystocele, rectocele and prolapse. As I remember, he divided his cases into three groups: (1) Those in which repair procedures were done in the vagina combined with suspension procedures through the abdomen; (2) those in which total vaginal hysterectomy and repair procedures were done, and (3) those in which the Watkins interposition procedure combined with amputation of the cervix and high rectocele repair was done. I do not remember his exact figures but there was a much larger group of cures in the cases in which the Watkins interposition operation was used combined with amputation of the cervix and rectocele repair than in the other two groups. Vaginal hysterectomy combined with anterior and posterior vaginal repairs was followed by a greater incidence of failure and a greater incidence of prolapse of the vagina than either of the other two procedures. Of course, the Watkins interposition operation has its limitations as do all other operative procedures regardless of where applied, and no one should attempt extensive reconstruction of this type unless he possesses a certain degree of ingenuity and ability to modify classical procedures to more properly fit the case in hand. Almost invariably cystocele accompanies prolapse and personally I have tended to favor the Watkins interposition procedure wherever it is at all applicable.

Rectocele and Perineal Repair.—A simple incision at the posterior margin of the vaginal orifice with dissection upward of a small vaginal mucosal flap, followed by suturing together in the midline of the perineal muscle and fascial structures does not constitute a repair of a torn rectovaginal septum and rectocele, but so often we see a patient who has had such a procedure done and still a large rectocele rolls over the repaired perineum into the vaginal orifice. The proper repair of this condition necessitates carrying the posterior vaginal wall dissection upward in the midline to the top of the rectocele formation and a reflection laterally of these

flaps sufficient to expose torn edges of the vaginal wall musculature so that they can be properly united in front of the rectum, thus reconstructing the rectovaginal septum. Occasionally it is necessary to carry the dissection on up to the top of the vaginal vault because of enterocele formation high in the vault of the vagina. After the difficulty in the rectovaginal septum has been corrected by suturing the torn edges of the vaginal musculature in front of the rectum, sutures should be so placed in the perineal region that they include the margins of the levator ani and bring these structures together in front of the lower portion of the rectum just above the anus. In other words, a proper, fairly thick dam or wall should be built in front of the rectum above the perineum; otherwise a cure of rectocele will not be accomplished.

In closing, I should like to summarize as follows: (1) A number of factors may play a part in the formation of cystocele, rectocele and prolapse. They are not all a result of poor care and improper technique on the part of the obstetrician. There are certainly definite fundamental developmental defects present in a fairly large group of women that make it possible and easy for these conditions to arise. When operative procedures may seem indicated, certain definite indications for operative correction of the difficulty should be searched for and unless there is a definite indication, operative interference should not be instituted. Certainly there are many women who have had operations done upon the female generative organs for relief of back pain when the back pain was entirely due to orthopedic conditions which were not recognized. In the surgical correction of cystocele, rectocele and prolapse, the gynecologists should realize that he is dealing with a type of hernia formation and he should so plan and execute his operative procedure that it will give the greatest likelihood of relief of the condition.

3601 Cedar Springs Road.

ABSTRACT OF DISCUSSION

Dr. Elbert Dunlap, Dallas: The number of surgical procedures used in correcting cystocele and rectocele is evidence that no single operation is suitable to all cases. It is important to determine the extent and character of the pathological condition to be cared for and then to apply the most suitable principles of plastic surgery with as nearly perfect technique as possible.

In addition to the treatment given by the essayist, allow me to call attention to the Manchester or Fothergill operation which may be helpful in certain conditions.

In caring for the exaggerated rectocele the longitudinal incision over the crest will allow the separation of good vaginal flaps which are so essential and give access to the muscle and fascia of the pelvic floor.

Dr. M. S. Seely, Dallas: Dr. Goff has given us a rather complete resume of the symptoms and conditions which are brought about by prolapse of the uterus in various degrees, and the cystocele and rectocele which often accompany it. Sometimes it is hard to say just which is of the greatest importance. Certainly, we see each of these conditions, and all of them, developed to a rather marked degree in some patients who complain little of them; again, they are developed in only a moderate degree and the patients have symptoms which are directly referable to them. A correction of the prolapse relieves some of them completely, and again though our work is mechanically all right, the patients are not relieved of the symptoms of which they complained before operation. All methods of repair and suspension have given us some relief and some failures. When we have put structures back in the best possible position with adequate tissue supports, we have done the best we can for patients mechanically. The follow-up treatment is frequently of great importance. Relieving the inflammatory processes which have resulted from the prolapse goes far toward insuring success of the entire job. A failure to recognize the fact that hypoplasia of the supporting ligaments is a factor in the prolapse in those non-parous individuals is sometimes a cause for failure to cure the prolapse. A shortening of hypoplastic ligaments does not make of them adequate supports.

Dr. Karl John Karnaky, Houston: I enjoyed Dr. Goff's excellent paper, but I should like to add a point to this excellent paper and that is a new way of treating the vagina postoperatively. This work is based on my research at the Leukorrhea Clinic, Jefferson Davis Hospital, Houston, Texas, on acidity and alkalinity; vaginal flora; and glycogen contents of the abnormal and normal vagina. After operations on the vagina, such as for cystocele, rectocele, vaginal hysterectomy, or even after cauterization, coagulation or conization of the cervix, a secondary infection is produced. This infection is no different from an infection obtained by a patient by the various ways she may obtain it. In other words all vaginal infections are alike and all vaginal infections are treated alike, namely by acidifying the vagina. Based on the above facts we began to acidify the vagina after all vaginal operations whether it was an operation for cystocele, rectocele, vaginal hysterectomy, or even after each cauterization, coagulation or conization of the cervix. We have shown that no pathogenic vaginal bacilli or cocci would grow at a *p*H below 5.0. Also sutures exposed to low acid medium remained five to twenty-one days longer. In our hospital we now place in the vagina immediately after the above mentioned vaginal operations, twelve to twenty-four Floraquin tablets or two to three doses of Ortho-gynol jelly, depending on the size of vaginal vault. Then in the ward or at home, as the case might be, one to two Floraquin tablets are inserted night and morning, or soft acid Ortho-gynol jelly (*p*H 4.5) is inserted night and morning. This keeps the vagina acid and the patient has no foul, malodorous discharge. The patient is very comfortable and the incisions heal quicker in most cases.

HARM OF MAKING CHILDREN DIFFERENT

"There probably is no unhappier child than the one whose parents insist that he be different, wear different clothes, have a different kind of haircut, or in some other way be made conspicuous," Douglas E. Lawson, Ph. D., Carbondale, Ill., declares in *Hygeia, The Health Magazine.* "Children's personalities carry the scars, sometimes for life, when parents attempt this kind of personality surgery in the effort to create an improved variety of child."

A FEW NOTES ON PRENATAL CARE*

C. P. HAWKINS, M. D.
FORT WORTH, TEXAS

In choosing the subject of prenatal care, I realize I have selected a familiar one, that has been thoroughly standardized the past few years. No attempt will be made in this paper to cover all the common rules of conduct during the prenatal period. These details are amply covered in the modern textbook and are available to all. Rather is it my desire to call attention to a few observations on the care of the pregnant woman, which I feel have not been sufficiently stressed. I shall discuss only three topics — the mental attitude, the blood, and the thyroid.

The danger of set rules in the medical supervision of any condition is that they tend to lose sight of the individual. While education has so ably improved the physical condition of mothers, very little attention is being paid at this time to the mental attitude of the patient toward her state. It certainly should be a most important item in prenatal instruction. The modern girl, with her psychoneurotic tendencies, has not the mental sturdiness of her pioneer mother who approached with courage the rigors of a conscious birth. And while the painless childbirth has been a wonderful boon to womankind, it has been a mental handicap, for the patient must not feel that the relief of pain transcends in importance the safety of herself and babe. The present-day mother is losing sight of the normal processes of pregnancy.

McCord struck the keynote back in 1932:

"How seldom do we during pregnancy instill into our patient a confidence in the approaching event, inform her as to what she can expect, that no time limit can be put upon labor; describe to her the mechanical changes that must take place before the birth is safe for her or her baby? It is much better for the woman to receive accurate information from her physician than a medley of information from her friends. Try to see that every woman goes into labor with a clear cut mental hygiene."

We should teach the pregnant woman that she is the most fortunate of creatures; only to her is given the glorious opportunity and privilege of creating life; that completely furnished within her body is this mysterious factory that builds the home of a human spirit. It is not for her to suggest the architecture, but to furnish every atom of material. She eats, not to satisfy her appetite, but to build the baby's body. She rests, she exercises, all to the end that her good health is transmitted to her offspring. The only sunshine the babe receives is through her. The vitamins and minerals, so essential to its growth, are all tapped from her storehouses.

This may sound like "granny" talk to many, but I know of no field in the practice of medicine where the art and science of psychiatry is more applicable than in pregnancy. To properly care for herself, to follow the directions of her physician, and prepare herself for the ordeal of labor, the pregnant woman must have a wholesome and sacred attitude toward her state. The modern prenatal clinic does not have time for this phase of the work, and often the busy physician in his private practice does not take time. Many of the psychoneuroses of pregnancy may be avoided by a few quiet talks between the doctor and his patient. Many of the cases of vomiting of pregnancy may be improved by the doctor's attention to the psychic influences. Symptoms that are common and unnoticed during the patient's life previous to pregnancy, at this time become accentuated and a subject of concern. Many lay magazines, periodicals, and daily papers are full of advice to the pregnant woman, emphasizing usually the technical points and aggravating her worry. Discussions are frequent in modern women's clubs over the types of anesthesia used, or the length of time it takes a woman to deliver her baby, whether she should employ a physician who shortens her labor with forceps or to allow "nature to take its course." The susceptible pregnant woman begins to feel that she is in a pathological state, a definite forerunner of anxiety. Such a patient with her many complexes is a care to her physician during the last thirty days of her pregnancy. She has many attacks of false labor; she may enter the hospital a time or two, thinking she is in labor, only to go home disappointed. Her nervous tension increases, her whole family is kept in suspense, and she comes to the day of delivery totally unprepared for the ordeal. She usually has a stormy first stage, is very uncoöperative, has poor results from the sedatives, until the doctor, harassed by the entreaties of the family, takes measures that his better judgment does not dictate.

The fault lies in the fact that the patient has missed entirely the important idea and has focused her attention on an event, the intelligent handling of which rightfully belongs to the physician. The task at hand, and the one on which the mother need study, is the proper care of her body and the nourishment of her child. Accepting this as her responsibility, she will approach the final days with an undisturbed mental equilibrium,

*Read before the Section on Obstetrics and Gynecology, State Medical Association of Texas, Dallas, May 15, 1940.

determined to "see it through," by whatever means her physician feels best for her and her child.

No doctor can instill this faith into his patient unless he has it himself. Good obstetrics can be practiced only by one with an obstetrical conscience. May we still teach our patients that pregnancy, even though improved with scientific protection, is still a normal process; that the margin between sickness and health is probably a bit narrower and requires closer observation, but that the reward is more easily attained by those who follow the rules.

THE BLOOD IN PREGNANCY

During the past ten years much has been written about the anemia of pregnancy. Because of these discussions the impression has become widespread that there is an anemia peculiar to pregnancy which occurs in a vast majority of cases.

I am sure we have all noted that the average case shows a lowering of the red cell count and hemoglobin during the prenatal period. A typical case history is as follows: A patient presents herself for examination about the eighth week. Her red cell count is 3,500,000 and her hemoglobin 70 per cent. By the sixth month her hemoglobin may be 55 to 60 per cent. Iron is given, and the hemoglobin may be lifted ten points, but no amount of iron, liver, or stomach extract will raise the red count or hemoglobin above 70 to 75 per cent. A check of the blood, three to four weeks postpartum, shows the blood count back to normal. It is this situation that stimulated the hematologists to enter the obstetrical field.

Before any conclusions are drawn from these reports, a brief review of the physiology of pregnancy should be timely. First, the fetus in utero is essentially parasitic by nature and it satisfies its physical desires without any consideration for its host. Second, in the last trimester of pregnancy there is a definite storage of water in the maternal tissues; this is considered a protective mechanism against the fluid loss of parturition and the puerperium. These two fundamental facts must be kept in mind in studying the blood of the pregnant woman.

Normally, an excess of iron is stored in the liver. Many women do not seem to possess this storage, either because of the monthly loss from menstruation or due to dietary deficiency. As a consequence, she enters pregnancy with her reserve depleted.

Bethel in 1936 reports from a comparison of the blood pictures of pregnant and nonpregnant women that the anemia in pregnancy is due either to a pre-existing iron depletion or to an inadequate intake of protein of high biologic value. He states that these can all be recognized early in pregnancy. This would lead us to believe that when a woman has sufficient storage of iron in the beginning of pregnancy, a balanced diet is capable of holding the blood within normal limits. Fullerton, in a study of over a thousand cases in Scotland, concluded that where hypochromic anemia in pregnancy is marked, the anemia probably existed before pregnancy.

Eskridge and Servier, Oklahoma City, report in a thousand consecutive cases in private practice that 54 per cent had an erythrocyte count above four million in the first trimester of pregnancy. This percentage decreased to 47 in the third trimester.

Ample evidence has been presented to justify the normal increase in blood volume as a cause of this apparent anemia. Oberst and Plass report their findings to confirm the conception of a blood dilution during pregnancy, with a prompt elimination of the excess water during parturition and the puerperium. Lebate, in January of this year, reports a series of blood studies which show that during the first ten days following delivery, the red count and hemoglobin show a definite rise. He found this adjustment was caused by concentration occurring as a result of fluid loss with a consequent readjustment of blood volume. He further concludes that mild forms of anemia developing during pregnancy are due to physiologic readjustments and do not represent true anemia.

What then is to be our attitude toward the blood picture of pregnancy? When a patient presents herself early in pregnancy, we should make a complete blood count. According to Bethel, a lack of iron can be recognized before the development of actual anemia by the presence of a lowered color index or of red cells of less than normal size. In such cases, the administration of an inorganic iron preparation in adequate dosage is indicated. Ferrous sulfate is the form most commonly recommended. Very rarely is the anemia of the pernicious type that is responsive to liver or stomach therapy. The obstetrician should further realize that as pregnancy progresses, a hemoglobin of 65 to 70 per cent is physiologic; that no amount of iron or diet will influence it to any appreciable degree. Assurance may likewise be taken in the fact that soon after a normal delivery and an uncomplicated puerperium, the normal water balance will be re-established, and the normal blood picture will return. At least, the magnitude of the problem is not as great as it is generally stated.

THE THYROID IN PREGNANCY

The most important directing influence of the endocrine system appears to be the thyroid gland. Especially in woman do we find its protean influence so manifest. It dominates completely her reproductive system. It is unfortunate that the function of the thyroid has not been sufficiently emphasized in the care of the pregnant woman. There are still too many physicians practicing obstetrics who fail completely to realize the harmful effect of hypothyroidism. This is partly due to the fact that there is still widespread hesitation in administering thyroid extract without first taking a basal metabolism reading. And since the vast majority of pregnant women are still being attended by practitioners who may not have access to the apparatus necessary for the test, interest in thyroid therapy has been dormant. Even so, the estimation of the individual metabolic rate is still not an exact science, and the physician after reading a metabolic report still has to use his clinical acumen in the proper administration of the extract. I do not wish to go on record as disparaging the use of the basal machine; rather do I want to encourage the physician without access to one to use his careful clinical observation and become thyroid conscious. In my experience, the proper maintenance of the normal metabolic rate is the most important safeguard in the prenatal period.

Many years ago I became interested in thyroid therapy from observation and from reading that it was of benefit in sterility. I noted that many sterile patients became pregnant after a short period of thyroid therapy. Unfortunately many of these women, after becoming pregnant, would discontinue its use and would usually abort about the second or third month. The conclusion was naturally reached that for a hypothyroid patient to get pregnant, she must take thyroid, and to stay pregnant she must continue to take thyroid. These observations were gradually extended to the borderline patients who became pregnant at intervals without the administration of thyroid, but for the lack of it soon aborted. It was also noted that those women who were taking thyroid before conception, usually escaped the customary let-down experience of the first three months. Suspicion at that time pointed to the fact that during the first few months of pregnancy there is an undue drain on the thyroid, too much for the "lazy" one to meet, resulting in abortion. After the advent of the basal metabolism apparatus, it was verified that during the early months, a pregnant woman has a lowered rate, which rate gradually rises until it is plus during the latter months.

I would particularly urge the recognition of hypothyroidism early in pregnancy. While it is obvious that these patients should begin thyroid therapy before pregnancy, many do not consult a physician until conception has taken place. A few of the classical signs which are common in hypothyroidism are: low blood pressure, slow pulse, dry skin, cold hands and feet, an inability to keep warm, lack of perspiration even in the summer time, brittle nails, a feeling of tiredness, or as the patient so plainly expresses it, a desire to work but an inability to force her body to the task. Naturally, not all of these symptoms will be present in every case, but there will always be some symptoms to arouse the suspicion of the alert obstetrician. I have yet to see the hypothyroid patient who would say she felt well the first few months of pregnancy. Not only does the proper administration of thyroid to these unfortunate individuals relieve them of their exhaustive state, but it likewise picks up their drooping spirits and adds sunshine to their soul. Due to a more careful maintenance of the normal metabolic rate, I have noted a lowered incidence of the vomiting of pregnancy, a lessening of the early abdominal cramps, and a relief of many of the indefinite pains over the body.

Time will not permit me to enumerate the many influences of the thyroid on the unborn babe. This is common knowledge. We are all also aware of the studies now being accomplished on the thyroid with reference to the toxemias of pregnancy. One of the most interesting, but little discussed, phases of hypothyroidism is its influence on labor. These patients are invariably slow to begin labor. They may threaten labor for a month with indefinite uterine cramps, confusing both themselves and the physician. When labor is finally instituted, the contractions are usually at long intervals and not expulsive in character. As a consequence, labor is usually longer. Ordinarily the baby's gain in weight is greater than the percentage gain of the mother, and naturally, the mother complains of exhaustion early in labor. Following the third stage of labor, the uterus is prone to relax, and postpartum bleeding and subinvolution are common.

It has been my observation that these patients react quickly to sedatives. Ofttimes a small dose of the barbiturates will stop their labor entirely. All uterine contractions usually stop in the second stage in these patients as soon as an anesthetic is administered. In summary, these are the patients who make the obstetrician wait, and wait, and wait. Much of this discomfiture of labor can be avoided by early recognition of the

hypothyroidism and early administration of thyroid extract.

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1212 W. Lancaster.

ABSTRACT OF DISCUSSION

Dr. T. F. Bunkley, Temple: Dr. Hawkins has very aptly appealed to our intelligence, and has refrained from detailed discussion of the many minor but still very important facts that might be applicable to the care of every pregnant woman. Instead he has taken up three major conditions about which there might be room for discussion.

I agree with Dr. Hawkins that the mental attitude of the patient and her ability to adjust herself has much to do with the happy outcome of a normal pregnancy and labor. I believe we might even start this mental adjustment in the young bride before pregnancy has occurred. The modern girl today is anxious to know what it is all about and often consults her physician even before she marries. We, as obstetricians, should take advantage of this opportunity and advise this prospective mother as to her sex life, her responsibility to her husband, to her home, and to society in general. If we advise her wisely, then she will enter pregnancy without fear of the results. One of the first "don'ts" I give a patient on her initial visit to my office is, "Don't pay any attention to what other people may tell you about pregnancy or labor." I try to gain her confidence and then insist that she come to me with all her questions and doubts, and I assure her if I cannot give her the answers, I will find someone who can. Confidence in our own knowledge and ability, instilled in our patients, will always make for a more normal pregnancy and labor and relieve any mental uncertainty.

The changes which take place in the blood of the pregnant woman are more or less familiar to all of us, though perhaps little understood. We know there is an increase in total blood volume and blood plasma; the sedimentation rate is slightly increased and the carbon dioxide combining power decreased during pregnancy, and the albumin-globulin ratio is thought to be altered. The significance of these facts is still in doubt. We are familiar with the apparent secondary anemia found in most women during pregnancy. This is usually a hypochromic anemia which may be caused by the demands of the fetus, or it may be due to the inactive and sedentary life on the part of the mother before and during pregnancy, or a dietary deficiency causing a vitamin deficiency and an inability of the mother to store sufficient amount of iron in her tissues. However, I agree with Dr. Hawkins that unless there is a marked anemia or the patient shows some very definite symptoms which might be due to the anemia, it is only necessary to advise her to get lots of sunshine and fresh air, proper rest and exercise, and a well balanced, high vitamin diet. If medication is indicated I prefer, as the author does, to give ferrous sulphate in some form.

I am glad Dr. Hawkins has given so much discussion of the thyroid as it relates to the pregnant woman. This is my pet subject in obstetrics, and I do not think the writer has overstressed the possible effects of the thyroid on pregnancy and labor. I have known women apparently sterile for years, who have become pregnant after taking three grains of thyroid daily for over a year. There is no doubt but that many abortions are due to a thyroid deficiency. The happiness of the mother during pregnancy and the development of the fetus, the weight of the mother and baby, and the course of labor may all be influenced by the thyroid gland. But I wish to give a word of warning: I do not believe any patient should be given very large doses of thyroid over any period of time unless her general condition is checked at rather frequent intervals by a basal metabolism test.

I have enjoyed Dr. Hawkin's paper very much for he has given us a great deal of material for serious consideration.

Dr. M. S. Seely, Dallas: The essayist has called our attention to the proper mental attitude of the patient. We should not fail to recognize that our mental attitude or the reassurance that we can give to the patient early in pregnancy is of vast importance. If the fear which their mothers, grandmothers and old maid aunts have put into them is continued for the entire term of gestation, they believe themselves to be facing a terrible ordeal, and it is a terrible ordeal under those conditions. Assurance and reassurance that they can be kept comfortable, that their pains can be minimized, and that the attending physician will be their helper to the greatest extent possible, has to be said and resaid to overcome the effect that other women have caused upon them. It is frequently very trying to deal with a young woman who is about to bring the only grandchild into a large family where the grandmother and the childless aunts are all trying to help. I believe we owe the mother our best effort to build up her reserves: the proper food, the proper rest and the proper support of her endocrines, the storing up of necessary minerals in her body to carry her through the gestation and the period of lactation. If we look at the superficial veins of the gravid patient we will see them standing out large in the third trimester. Her general circulation is storing up a large amount of blood; I don't know how much more than a normal non-gravid individual of the same weight, but I have sometimes thought it was probably double. I think much of that is fluid dilution and sometimes that may account for the apparent anemia found in a study of the blood by hemoglobin estimation or cell count. These patients should be given iron in an assimilable form and foods which we recognize as blood builders because we often are confronted by some crisis that makes us wish for more blood for the patient, and certainly no individual has more blood through the period of gestation and delivery and lactation than she needs.

SYSTEMIC INFECTIONS AS A SEQUENCE OF PARANASAL SINUS INFECTION*

O. M. MARCHMAN, M. D.
DALLAS, TEXAS

Accessory nasal sinus infection occurs at all ages, from the tiniest infant to the most ancient patriarch. It is no respecter of persons; it attacks the half-starved, tattered Bedouin or those who live in luxury. Whereever the common cold or influenza is found sufferers from paranasal sinus disease will be encountered. Its geographical distribution is unlimited.

While its victims are more numerous during the winter, it is prevalent during all seasons. It is estimated that one out of every four of all ages have the disease in one form or another.

Acute rhinitis, chest colds, mild or severe epidemics of influenza, pneumonia, and the infectious diseases of childhood, particularly scarlet fever, are active predisposing causes of nasal sinus disease. Low, changing temperatures, humidity, wind, dust, irritating vapors, exposure, fatigue, overwork, loss of sleep, excessive worry, together with insufficient or too much clothing, insufficient or improper food, tobacco, and alcohol are among some of the predisposing causes. Hypertrophied turbinates, structural changes in the nose, septal spurs, ridges, deflections that impinge upon other nasal structures, thereby preventing proper drainage and ventilation of the nasal passages and blocking the sinuses, are other important causes of sinus infections. Nasal polypi, infected teeth, infected adenoids and tonsils, swimming, allergy, endocrine disorders, and many other conditions, directly or indirectly cause disease of the paranasal sinuses.

It is estimated that 75 per cent of all focal infections are in the head, and are found in the nasal accessory sinuses, teeth, gingivae, tonsils, adenoids, middle ear, and mastoid. Thus the tremendous handicap these deeply hidden, walled off, poorly drained sinus cavities are subjected to is seen. Their further chances of keeping clear of infections are greatly encumbered by being an unfortunate, close neighbor to the nose, which organ always holds an open sesame to every stray coccus or bacillus that comes its way.

Infected ovaries, fallopian tubes, uteri, appendices, gallbladders, tonsils, and adenoids may be totally removed, but not so with the sinuses, for they are ever with us. They may be rasped, curetted, ventilated, treated topically with medicated solutions and evis-

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cerated; the account balanced, the happy, hopeful patient is dismissed only to return in a few short months with an acute rhinitis and a renewal of infection in one or more sinuses.

My enthusiasm has not been dampened in the least in regard to the prevention and management of acute and chronic sinusitis, and their problems as foci of infection. Our profession has made much progress in the past twenty-five years, but we clearly realize that we yet have many intricate, difficult and perplexing questions to solve. "We must climb because there are stairs ahead of us." "Difficulties are made to overcome."

Accessory sinus disease is endemic throughout the civilized world and at times becomes pandemic as in 1918 and 1919, when millions fell victim to the world's greatest influenza disaster. Our profession has been faced with the problem of sinus disease and its far-reaching secondary infections to all parts of the body throughout the years. Since the investigation of focal sepsis by Frank Billings and his staff of co-workers in 1912 and 1913, we have been made "sinus disease conscious."

The nasal sinuses are subjected to the same diseases that involve the mucous membrane of the nose. We all know that the sinuses are but anterooms or side pockets of the nose, having the same mucous membrane, the same nerve, blood and lymph supply, being only slightly altered, but always sharing to a greater or less degree the same infectious diseases as the nose. The acute infections usually take place in the nasopharynx and spread by continuity to the nose and sinuses.

Chronic infections of the sinus mucous membranes take place after repeated acute attacks. The foundation of chronic sinus disease is generally laid in early childhood.

One of our unsolved problems is focal sepsis as found in the sinuses and its relationship to general diseases. As the sinuses are hidden they present many difficulties in differential diagnosis, as compared to the tonsils, ears and periodontal tissue, which are more accessible. Sinus foci are not generally taken into consideration when examining patients, resulting in failure to recognize sinus disease when present, especially when there is a low grade, smouldering, remittent infection. As the fields of the internist and otolaryngologist are the same in focal sepsis, it is very plain that close coöperation is of great importance in solving the intricate problems in connection with it.

The accessory nasal sinuses like the tonsils, adenoids, teeth, and ears are harbingers of secondary infection and present a perplexing question in everyday professional life.

Ignoring the paranasal sinuses in a general examination of the patient who is suffering as the result of secondary focal sepsis is not due to the lack of knowledge on the part of the family physician or internist. On the other hand, it may be laid to the fact that it has been only in recent years that such signal importance has been attached to these mucous lined cavities, which, together with the mucous membrane of the nose, cover as much space as the entire area of the face. Symptom complexes so varied and diverse as to cover every structure of the body, have been proven to be the result of secondary infection from the paranasal sinuses, the same germ found in the secondary focus having been cultured from the primary morbid process in the infected sinus.

Disheartened patients are constantly seen in physicians' offices who are depressed and discouraged because of long standing, painful and in many instances serious secondary infection in the muscles, joints, kidneys, gallbladder, heart, lungs and nervous system. Many of these patients obtain only temporary relief from various methods of standard therapy, yet they go from one office to another without finding their true source of infection. Other patients who seek our advice and help are those with secondary infection in the eyes, middle ears, mastoids, larynx, and bronchial tubes. An investigation of these depressed patients, who are chronic sufferers from "all the ills to which flesh is heir," who have had all manner of tests, thorough physical check-ups and complete roentgenograms of all suspected organs, shows that many of them have never received any attention directed toward their accessory nasal sinuses as an avenue of possible focal sepsis. Why we as physicians on many occasions investigate carefully the tonsils, ears, gums, teeth and all other organs and glands of the body for primary foci of infection and disregard and neglect the large area of mucous lined nasal cavities with their rich blood and lymph supply is beyond comprehension.

If a patient has frequent attacks of middle ear infection, a distressful morning cough, or has a number of acute colds during the year, or frequent attacks of hoarseness, and above all a mucopurulent or purulent discharge from the nasopharynx, these symptoms, as we know, will direct us to a close investigation of all the accessory nasal sinuses. The carefully taken clinical evidence, together with properly made stereoscopic films, will in most cases reveal the sinus or sinuses that are infected.

Dr. Frederick M. Law states that no roentgen films of the sinuses are dependable unless they are taken with the patient's head absolutely immobilized. This is secured by a clamp or strap and is used in all cases and in all positions of the head. He further states that the cancellous structure of the bones of the skull should be seen on the films; otherwise, he says they are useless. Dr. Law also states that holding a film to a window or an electric light and attempting interpretation is misleading; that the stereoscopic films are by all means most preferable.

The members of the regular profession are in no wise sympathetic with the gang of human leeches who cling like barnacles to chronic suffering humanity, promising them every and anything as a sure cure in sinus disease and fleecing them to the last dime. May we labor carefully and honestly to bring about a better understanding concerning diseases of the accessory sinuses and the vast importance they play in the field of secondary focal sepsis.

Medical Arts Building.

ABSTRACT OF DISCUSSION

Dr. Louis Daily, Houston: This has been indeed a timely presentation. Dr. Marchman wisely sensed the reaction of patients, and the antagonism they develop against doctors in general, when they go from office to office seeking relief and failing to get it. In these days of specialization it is difficult to avoid not having a one-track mind, and the sinuses frequently are not given a thorough examination until the patient, on making the rounds of offices, comes to the nose and throat specialist. As Dr. Marchman pointed out, frequently the x-ray examination of the sinuses, considered adequate by internists for a sinus examination, does not really give a correct picture of the anatomic pathology of the sinuses. This is especially true in early cases, in young people, and where the mucous membrane is only slightly thickened, though infected. Transillumination and x-rays in these cases may be negative; irrigation and lipiodol will reveal a sinusitis.

For an adequate diagnosis of sinusitis I depend more upon the history than upon physical examination. Rhinoscopy may show a pharyngitis, engorged turbinates, pus, or mucopus in the meatii, under the middle turbinate, in the postnasal area; and again the rhinoscopy may be entirely negative. In obtaining a history I question the patient as to whether he is subject to frequent colds, and if they are seasonal or perennial. Often they will say that they can hardly rid themselves of a cold; before they are entirely through with one, another comes on.

The history of chronic tracheitis, bronchitis and a low grade of laryngitis, huskiness, is significant. But above all, I pay more attention to a history of postnasal discharge on lying down during the night and especially to a postnasal morning drip. Not infrequently when rhinoscopy, transillumination and the x-rays are negative but the history is suspicious, irrigations will reveal an infected sinus. Recently I had a striking case that illustrated this point. A lady from a neighboring community brought her son, age 12, to the office. He had had a cold for six months, coughed all through the day and especially through the night. He was treated for bronchitis and was told that he might have whooping cough. His roentgenograms were positive. Irrigation of his antra revealed much pus. In a few weeks his symptoms disappeared. The mother, impressed with the possibility that the sinuses might

be a source of trouble, one day told me that one of her girls, age 15, would hawk and spit upon rising in the morning, and that she felt satisfied that this must be due to a sinus infection. Rhinoscopy transillumination and x-ray study were definitely negative, and I assured her that the girl had no sinusitis. She asked me to irrigate the child's sinuses the same as I had done on the boy, as she felt sure that the girl had sinus trouble. When much mucopus came out with the washings I was amazed, and she said, "I knew all the time that I was right." Let me pause right here and say that surgeons consider an exploratory laparotomy justifiable. We nose and throat specialists, when in doubt, should not hesitate to resort to a minor harmless procedure, which may reveal a focus that is undermining the patient's health. Sometimes the washings are negative but the lipiodol will show more or less of a filling defect and the next washing three or four days later will bring out much pus. The oil softens and loosens up the material which is expelled with the fluid after a few days.

I have had many cases of allergic manifestations such as urticaria which have cleared up completely following attention to an infected sinus. One lady suffered for twenty-five years from a severe urticaria after eating certain foods, and has been well for eight years following a radical maxillary operation. Six weeks following the operation she tried eating bacon which previously was sure to bring on an urticarial attack and was surprised to find that it didn't disturb her in the least. Another patient, along with the skin manifestation, suffered from severe headaches that required from one to two hypodermics a day. The patient recovered completely after clearing up a bilateral sinusitis. Another lady suffered constantly for twenty years from itching all over her body. Ephedrin relieved the itching but made her very nervous. Certain foods and drugs like aspirin would bring on an urticaria. On account of her prominent connection in the medical profession and her wealth, she had the best this country offered in medical service. She spent one year in Europe under a famous professor. All kinds of tests and examinations were made through all these years, except an examination of her sinuses. She gave no history of postnasal drip; there was no physical sign that would make one suspect sinusitis. I thought of it on account of my previous cases. Roentgenograms were positive; she had badly infected antra. I did a bilateral radical maxillary operation and she has been well since.

Time does not permit a report of these cases in detail. I think it is worth while to mention here a case that I reported before this section some years ago of a young man who sent letters through the mail threatening kidnaping the son of one of our wealthy citizens. He was arrested, but being under age he was paroled. Finally we found out that he had an infected antrum, and after a radical operation all his mental symptoms cleared up. I again want to compliment Dr. Marchman on the masterly presentation of this paper.

Dr. Wm. D. Gill, San Antonio: Dr. Marchman has given us the benefit of his extensive experience in dealing with sinus disease in this valuable and timely paper. I wish that every doctor practicing gastro-enterology and internal medicine was fortunate enough to be here today to hear this paper. Many of them would benefit by what has been said concerning the relationship of chronic sinus disease to systemic disorders. Today the trend seems to be away from focal infections and their importance is often minimized, a fact which is not always best for the patient. One should bear in mind that swallowing infected secretions over a prolonged period frequently leads to secondary foci elsewhere. In many instances of chronic gallbladder disease, hepatitis and colitis, the original source of infection is in the sinuses. After implantation of the infection has taken place in these areas, they become secondary foci equally as important as the original primary focus. As an example, it may be said that one could hardly expect to clear up a chronic colitis by treating the colon alone without giving attention to the areas supplying the infection.

In the treatment of chronic arthritis and certain chronic inflammatory diseases of the eye such as chronic uveitis, this relationship is most important. Treating one focus and neglecting the other can only lead to disappointing results. The type of bacteria isolated from the primary source can almost always be isolated from the secondary focus by means of agglutination experiments and cultural reactions identified as being one and the same strain. It is for this reason that we feel that autogenous vaccines should be made from organisms isolated from the nose and throat as well as the colon, and at times other areas such as the gallbladder, when it is practicable to do so. Such combined vaccines often possess a degree of effectiveness superior to those made from a single culture. Bacteria in one area may be of an identical strain as those present in another but nevertheless may possess a different degree of virulence, thus influencing materially the potency and therapeutic effectiveness of a given vaccine. One should regard the patient as a whole and not focus attention too sharply on the limited portion of the anatomy which comes within our special field; all of the factors which have a bearing on the patient's illness should be considered and the information thus gained utilized to the fullest in guiding the patient to recovery.

RECOVERY OF CASE OF RARE INFECTION REPORTED DUE TO SULFAPYRIDINE

Sulfapyridine treatment resulted in the recovery of a patient with a rare type of blood stream infection, due to the bacteria, Bacteroides, hertofore an almost invariably fatal condition, Alex E. Brown, M. D., Henry L. Williams, M. D., and Wallace E. Herrell, M. D., Rochester, Minn., report in *The Journal of the American Medical Association* for Feb. 1.

The authors say that the use of sulfapyridine is of particular interest inasmuch as the sulfamido compounds have been considered not to be particularly effective against anerobic (thriving best without air) organisms. Also, contrary to the authors' previous experience with the condition, the infection in the case they report was primary in nature and not superimposed on a chronic disease process.

ERUPTION DUE TO WRIST WATCH STRAP

A case in which a wrist watch strap which had been worn continuously for two months with no evidence of sensitivity suddenly caused a skin inflammation is reported by W. W. Bauer, M. D., Chicago, in *The Journal of the American Medical Association* for February 1.

The strap was made of a new synthetic, flexible, glass-like substance sold under a variety of trade names. It was responsible for intense itching and redness of the skin in contact with the watch band, followed by a definite eruption which the author thinks may have been precipitated by the patient's spending four hours in conference in an excessively hot room, during which time he perspired rather freely.

The patient has had hay fever since the age of 3 and is also sensitive to vegetables of the cabbage family and to certain fabrics.

CLINICAL DIAGNOSIS OF EARLY SYPHILIS*

PORTER BROWN, M. D.
FORT WORTH, TEXAS

Every year we have periods of intensified education emphasizing the early diagnosis and treatment of cancer and tuberculosis. We hear much of the same presentation of the subjects, and perhaps become a little bored with the repetition. It is this constant hammering on the elementary essential points of diagnosis and treatment, however, that has accomplished a great deal in saving lives and rehabilitating patients.

It is only in the last few years that we have had an awakening both of the laity and the profession to the enormity and seriousness of the syphilis problem. In the United States it is by far the most prevalent serious communicable disease. The profession has a just pride in reviewing the history of the conquering of such diseases as typhoid fever, malaria, smallpox and diphtheria. Our ego is deflated, however, when we are reminded that syphilis is fifty to one hundred times more prevalent in this country than in Great Britain, Denmark or Sweden. This situation is a real challenge to the doctors, public health workers, educators and the clergy.

As physicians, our failure has been due to the inability of most of us to diagnose syphilis and treat it properly after a diagnosis is made. The fundamentals must be stressed again and again until all doctors are constantly looking for syphilis and treating it as it should be treated.

The diagnosis and treatment of late syphilis is important, but with the exception of an occasional instance this is a matter of conservation. We will fail or succeed in eradicating the disease as we fail or succeed in diagnosing and treating syphilis at the earliest possible moment after it is acquired. It will be a long and difficult fight. With proper coöperation of the various agencies that are now interested it can be accomplished.

We cannot all be expert syphilologists but we can have a grasp of the essential features of early lesions which will make us suspect syphilis and subject the patient to such laboratory procedures as are necessary to make a correct diagnosis.

I do not feel that I am digressing to say something of the responsibility the physician has who finds a patient with early syphilis. He is the man who has the opportunity to see that his patient gets a clinical cure. He is the man who, by gaining the friendship and confidence of his patient, can get the full story, learn the source of the patients infection and get the information regarding contacts. It is equally important to thoroughly investigate these matters with a private patient as it is one in a clinic. I am sure we have all been negligent. We must remember there is no intermediate host for the Treponema pallidum. We cannot reach our goal without finding and treating all persons with early syphilis. If we shirk our responsibility it can only be said that we are responsible for the woes of the victims of the disease whom we could have brought under treatment at a time that would have spared them their suffering. It is true that all this takes time and often tries one's patience to the utmost. It calls for the practice of the art as well as the science of medicine, but it is worth it.

In calling attention to some of the diagnostic features of early syphilis I can only touch the high spots. I shall not attempt to discuss the differential diagnosis between syphilis and the many diseases of the skin and mucous membrane which are sometimes confused with it. It seems more important to emphasize the things which should suggest early syphilis to us, as a final verdict rests on a positive darkfield or positive serology. In early syphilis this is true for the expert as well as the average physician.

In taking up the subject of the chancre, I want to say first that one should never make this diagnosis by clinical differentiation. Relying on a morphologic diagnosis is nothing short of criminal. The only procedure that is worse is to give a patient "a little treatment" to see if the lesion will disappear, on the assumption that if it heals quickly it is a chancre and if not that it is some other disease. Such bungling so beclouds the diagnosis that it is impossible to make an accurate one until much valuable time has been lost.

There are two stories that we still hear from patients so frequently that it is shameful. In one instance we have a patient who gives an indefinite history of a "sore" and some, but inadequate, treatment. When questioned about "blood tests" he replies that, "Doc said he was so sure that I had a chancre that a test was not necessary." The other story often comes from a patient who had previously been to the same doctor. He presents himself with evidence of syphilis and when asked about a primary lesion replies, "I had a sore but Doc said it did not amount to anything. He gave me something to put on it and it healed in a week or two."

The real opportunity in early syphilis lies in making the diagnosis while the disease is in the seronegative stage. Patients diagnosed

*Read before the Section on Public Health, State Medical Association of Texas, Dallas, May 14, 1940.

at this time and properly treated get the highest percentage of clinical cures and cause the least number of new infections.

The chancre begins at the point of inoculation. Macular at first, it develops into a papule of varying size. Following this a superficial necrosis of the center occurs leaving an eroded or slightly ulcerated lesion with a serous exudate. The border is usually smooth and on palpation there is more induration than would be expected from the appearance of the lesion. The chancre is usually comparatively painless but marked enlargement of the regional lymph glands is an early change from the normal which is to be given considerable weight in a clinical evaluation of the picture. The adenopathy is bilateral with genital chancres and usually unilateral with extragenital lesions.

We must expect all sorts of variations. I have seen chancres that look more like a carbuncle than anything else and others which appeared to be simple erosions or resembled a herpes. Every genital lesion should be regarded as a chancre until repeated dark-field study and repeated serologic tests have all been made.

It should be remembered that a chancre in a male may be obscured by being intraurethral and that in examining women it will often be missed unless we look carefully at the cervix and on the vaginal walls.

Extragenital lesions which do not heal promptly should at once come under suspicion especially if there is satellite adenopathy.

The most common site for extragenital chancres is on the lips which is easily explained by the fact that very infectious mouth lesions are common in early syphilis and kissing serves as a means of contact. Other locations which should be mentioned are the tongue, tonsils, gums, cheeks, eyelids, neck, breast, abdomen, thighs and the skin adjacent to the anus. Chancre of the finger has been called the physician's chancre because it is usually acquired by doing vaginal examinations or removing tonsils without gloves.

Primary syphilis shades into secondary syphilis and again we have all sorts of vagaries which may confuse the unwary. Some patients have no secondary lesions at all or, if they do, they may be scarcely visible and transient.

Secondary lesions may be present while the chancre is still visible or they may not show up for months after it is healed.

The failure to see cutaneous syphilis often means that it has been overlooked. Our search is too casual if we have in mind such glaring things as large ham colored papules. It is only in a warm room with proper lighting that some lesions are visible.

The mildest cutaneous lesion is the roseola consisting of faint macules up to about one centimeter in diameter. In a cold room it may be confused with a mottled appearance of the skin caused by chilling. The macule shades into the papule. Descriptive terms are added to clarify the picture, such as lichenoid if flat, squamous if slightly scaly, and psoriasiform if the scale is thick. Follicular syphilides as the name indicates, consist of small papules occurring around hair follicules. Hyperpigmentation is often associated in this type of lesion. If the scalp is involved a typical moth eaten alopecia is produced.

Lesions of the mucous membranes are very important from the standpoint of diagnosis and infection. In a series of cases studied by the Coöperative Clinical Group 75 per cent of the women and 64 per cent of the men had such lesions. The syphilitic "sore throat" may be only a slight redness, or may be so severe as to have diphtheroid appearance. The tonsils are often swollen. Hoarseness is a common symptom due to edema of the vocal cords. The so-called mucous patch is identical with the papule of the skin, except that it has been eroded due to friction and moisture. Mucous patches are most often seen on the lips, cheeks and tongue. Genital mucous lesions are common on the labia, cervix, and vaginal wall in females, and on the glans and prepuce in the male. They are often seen about the anal margin in both sexes. Mucous lesions are transitory. They may appear and disappear within a short time even without treatment. The term condyloma usually suggests syphilis but it should be remembered that it merely designates a vegetative hypertrophy. Erosions about the genitalia may become vegetative regardless of the original cause. Flat condylomata are usually syphilitic. Filiform papillomatous lesions are not. All variations from the mucous patch to enormous vegetative cauliflower growths are seen.

Residual evidence of early syphilis is usually in the form of a macular atrophy at the sites of skin lesions. Very severe papular eruptions may disappear, however, without leaving a trace.

In considering early syphilis it is well to keep some generalizations in mind. I will list a few of these as they are pointed out by Stokes:

"A macular eruption, with erosions in the mouth and papules about the genitalia, suggests syphilis. If there are blisters on the skin the same association suggests pemphigus or erythema multiforme.

"A papular eruption on the palms or soles with nothing on the scalp, elbows, or knees, with no fissuring or patches of dermatitis elsewhere on the

body and without severe constitutional symptoms, suggests syphilis.

"Freedom from involvement of the mouth or genitalia in the presence of a general macular eruption is against syphilis. In a general papular eruption this has less weight, and in a pustular or follicular eruption the mouth and genitalia may often be free.

"A marked general adenopathy with an indolent general eruption speaks in favor of syphilis.

"The association of severe itching with an eruption of general character is against syphilis. The follicular syphilid, however, may itch, and the psoriasiform syphilids sometimes do. Highman has pointed out that the follicular syphilid in negroes is especially itchy.

"Rapidly falling hair and severe headaches, even before patches are detectible, suggest early syphilis. Thinning of the eyebrows is also suggestive.

"A sore throat with a general macular or papular eruption that persists more than a week suggests syphilis before any other possibility.

"A general eruption (exclusive of vesicular and bullous types) accompanied by marked loss of weight is suggestive of early syphilis."

This discussion has been necessarily inadequate as the details would have been entirely too long. Many things must be added to the features of early syphilis which I have mentioned to round out a proper concept of the disease.

In conclusion I earnestly urge every physician to be more vigilant in looking for early syphilis and to be more diligent in assuming all the responsibilities entailed.

Medical Arts Building.

ABSTRACT OF DISCUSSION

Dr. M. L. Fuller, Amarillo: I heartily agree with Dr. Brown on the diagnosis of syphilis and think, too, that if syphilis is diagnosed in the early stages of the initial lesion and intensive treatment is instituted at once it is possible and highly probable that the blood Wassermann reaction will not become positive. I should like to ask Dr. Brown if he thinks there is a time after the initial lesion appears when it becomes negative by dark field examination before the blood Wassermann test is positive, and if so, approximately how much time?

Dr. Brown (closing): It is difficult to answer Dr. Fuller's questions specifically. We are usually confronted with a primary lesion that has had local treatment and often a negative dark field is due to a lack of persistence in repeated dark field studies after using saline soaks. The day when a serological test will be positive varies considerable with the sensitivity of the particular test employed. The thing I want to insist on is that every effort be made to diagnose a seronegative primary lesion, but failure to make a positive diagnosis on the chancre should never be an excuse for not making a sufficient number of properly spaced serological tests to catch the diagnoses in which it was impossible to demonstrate the organisms by dark field examinations.

When in doubt about skin lesions a consultant who is familiar with the differential points and has had a rich experience in interpreting them can often give valuable assistance. This does not mean that the patient need be referred to him for the routine treatment of his disease.

We have talked almost entirely about the obvious manifestations of syphilis. In the last analysis, even in the hands of an expert syphilologist, the laboratory is the court of last resort in proving whether or not a patient has syphilis.

SOME CONSIDERATIONS IN THE PLANNING OF STATE AND LOCAL HEALTH SERVICES*

W. C. WILLIAMS, M. D.
NASHVILLE, TENNESSEE

Despite the fact that knowledge of the causes and methods of preventing most communicable and many of the preventable diseases has been at our disposal for many years, an analysis of present-day efforts at the Federal, state and local levels reveals that the lack of coöperative effort, or perhaps I should say the finding of too much independent effort, particularly at the state and local levels, has resulted too often in failure to utilize the accepted administrative and technical knowledge, methods and resources that are at our disposal for the control of preventable diseases which are no respecter of city, community, county or state lines. To use a current expression, there are too many *"fifth columns"* at the three service levels for one agency to stand alone successfully against the factors operating from within as well as those from without. All resources must be brought together in a coordinated program. Assuming that this hypothesis is essentially correct, we should take stock—make an unbiased and honest inventory of our resources to see that the title "good administrator" is deserved in fact as well as name. With the intellectual blackout that is inevitable in Europe as a result of the frightful aspects of modern warfare, we cannot help but be deeply impressed by the thought that we have a major responsibility in keeping the light of scientific and intellectual leadership burning for the uncharted and dark days that are to come to nations now at war and perhaps in time to our own Western Hemisphere. Coöperative and not independent effort among all groups is mandatory if we are to succeed in the erection of barriers that are impassable to an invisible or an insane menace.

Forgetting the martial implications, let us proceed to analyze the essential requirements in the planning and execution of a public health service at state and local levels. *First,* there must be some one agency in each state that has full legal responsibility for the formulation of minimum and uniform regulations to be observed by all individuals and agencies responsible for or engaged in the prevention and control of preventable diseases. There can be but little doubt that the State Department of Public Health must assume this responsibility. While legal regulations are essential for establishing uniformity of practice and for handling exceptional

*Address delivered before the Section on Public Health, State Medical Association of Texas, Dallas, May 14, 1940.

conditions, the true value of coöperative state leadership and assistance to local governments cannot be overestimated. Intelligent and sympathetic counsel, guidance and assistance will accomplish far more than all the regulations that can be included in the code of state laws.

Second, to meet the responsibilities imposed by the first item, it is essential that certain personnel and financial resources be available at the state level to assist most local agencies in the solution of their administrative and technical problems. It is not financially feasible or possible for all local governments to employ sanitary engineers, epidemiologists and other specialists that are needed for consultant services and special assistance from time to time. Even though some of the local areas may have specially trained persons on their staffs who are quite competent, there is some merit to the assumption that the fellow who does not occasionally need or desire the counsel and assistance of someone in his particular or in a related field should question his own intellectual honesty, because if he does not, the other fellow will. Financial aid should be extended by the state to local governments for assistance in the employment and training of competent personnel, provision of more adequate staffs to meet local needs, development of full-time city, county or district health departments, inauguration of special services for improving environmental and other conditions contributing to abnormal morbidity and mortality conditions, *et cetera*. The pioneering days are difficult, results are slow in materializing, but if we build soundly and well on basic services with qualified personnel to direct these services from the beginning, future success is assured.

Third, local governments receiving financial assistance through the state agency should be required to meet reasonable regulations pertaining to personal and professional or technical qualifications of all employees on a particular project regardless of the source of funds from which the individual employee is paid. This statement should not be interpreted as meaning that the state agency would be interested in particular individuals. It is only reasonable to assume, however, since an investment would be made in service, that the state agency would and should expect and get full coöperation and assurance as indicated that only qualified personnel were employed. Where the local administrator is sincere in his desire and efforts to employ personnel on the basis of merit, this coöperative agreement would serve as an excellent buffer against the local politician who insists that the fellow who can swing the most votes is the best public servant. Public service cannot be sacrificed for political expediency with the expectation that the quality of service will not be seriously impaired. It takes a good politician to keep out of politics. Too few health department administrators take the necessary time to show political leaders that an outstanding program of public service is good politics. The health administrator, state or local, who succumbs to the importunings of the partisan politician to employ the individual who has outlived his usefulness elsewhere, will in the future look back to that day as being the time he signed his own death warrant as a free-thinking and fully responsible public official. It is not difficult to defend the principle that very few public health administrators can take retired policemen and firemen and make bacteriologists, sanitarians or other qualified technical personnel out of them.

Fourth, and quite closely related to the two preceding conditions—the state has some very definite responsibilities not only for assisting in the strengthening of existing local services but in stimulating local interest in the creation of approved health services in areas where none now exists. This requires time, patience and diplomacy. The fellow responsible for the promotional aspects of this program must be a confirmed optimist who "can take it" without faltering and at the same time be able to sow a few good seeds that will germinate in the minds of community leaders and later bring forth active effort for, instead of a passive understanding of, public health objectives. The most successful administrator or field worker is not the individual who can render the greatest amount of individual service but the one who causes the other fellow to *think*, *see* and *do* for himself. The giving of typhoid vaccinations is an important but temporary measure in the control of typhoid fever that can be considered only as an antidote in any plan for the permanent typhoid control program. Why continue to give the antidote year after year when a reasonably complete program of environmental sanitation—teaching as to the source, methods of spread and measures for control, essential environmental sanitation—will not only prevent typhoid fever but other filth-borne diseases as well? The average person does not build a privy, protect the water supply or satisfy himself as to the quality of the family milk supply—largely because somewhere in the past somebody has failed to teach him the why and how of the basic principles of environmental sanitation and healthful living.

In planning a state-wide public health program the financial, personnel, statutory, and other limitations and rights of the state and

local agencies must be considered. Each has its direct as well as indirect responsibilities in a well planned program. Each also has many joint responsibilities.

City and county departments of health have definite responsibilities within their respective jurisdictions. There is much evidence that a joint city-county unit serving the urban and surrounding rural area is more effectively and economically administered than independent city and county departments.

There are certain problems for which the state agency as a rule must assume full supervisory responsibility if uniform and effective programs are to be organized and maintained. This is particularly true with reference to inter-state and inter-county problems such as stream pollution, supervision of the construction and maintenance of public water supply and sewerage systems, milk sanitation, etc. The state specialists in these fields should have full responsibility for seeing that approved public water supplies maintain the same standards of quality throughout the entire state, that grade A milk in El Paso is grade A milk in Beaumont according to accepted standards, etc. State backing, as a rule, strengthens local services and makes it possible for the local worker to receive expert consultant service in many fields without cost and in many instances services that are unobtainable otherwise by local agencies.

A case of preventable illness is an individual, family, community and area problem. The need for the coördination of service can be readily illustrated by the case of the young adult who moves from the country to city to find industrial employment. He develops tuberculosis within, say three years. The chances are even that he had the disease in a latent or mildly active form—at least the seed had been planted—before he left home. The provision by the urban area of care for this individual does not solve the problem. If he has direct or indirect dependents, and almost every wage earner has, an economic problem is created in town or back home or both by the loss of his wage earning capacity. Assuming that the economic problems are met from one source or another, there still remains the problem of finding the original source of infection, which in this instance would be without the usual jurisdiction of the urban agency. We must get back to the grass roots of the problem. If the patient came from an area with full-time health service, the health officer in charge should be notified directly and proceed as soon as possible to determine the tuberculosis problem among the family back home. This must be done on a family study basis.

In areas without full-time health service, the problem is more difficult and should be handled through the state department. Here again the family group must be studied because parents, grandparents or close family associates are the most probable and frequently found sources of infection. Diagnostic service as a rule must be provided in organized and unorganized rural areas by the state agency. These diagnostic units should reach each county at least once a month. Family contacts and persons referred by physicians should receive first consideration in the examination schedule. Nursing service for the organization and conduct of diagnostic clinics and follow-up service should be provided by local departments where they exist and from state sources if there are no local departments. The state-wide program must utilize the family physician to the fullest extent possible for treatment of cases ineligible for or unable to secure hospitalization.

The next logical question is "what are we to do with these cases after we find them, particularly in areas without a tuberculosis hospital?" Much can be done in the home and in the general hospital if we will stimulate some interest for better care in the former and break down prejudice about use of the latter. Complete isolation is not always possible in the home. If the case is found early, it is not an absolute essential in every instance. Anything that breaks the chain of spread, builds up individual resistance or improves the environment in which people live is a factor in the control of tuberculosis regardless of whether or not it be carried on as a specific tuberculosis control activity.

Persons suffering from tuberculosis in incipient and moderately advanced stages are admitted to general hospitals for practically every medical and surgical condition in the dictionary. How many of us have tried to get a case admitted with the diagnosis "moderately advanced, unilateral, active pulmonary tuberculosis right upper lobe with cavitation —collapse therapy needed?" Some general hospital administrators say they never admit active cases of tuberculosis to their institutions. Perhaps they are honest in so far as their actual knowledge of diagnosis on admission is concerned but the statement does not explain the high tuberculosis morbidity rate among employees of many of these institutions. It is safer and less difficult to lock the intruder out by controlling him in advance than it is to dislodge him once he has established himself in the household. There is no reasonable excuse as to why the facilities of general hospitals should not be made available for the emergency hospitalization of persons suffering from

tuberculosis and needing some type of collapse therapy, particularly pneumothorax. If the diagnosis is known, precautionary measures are not difficult to enforce and the danger to the hospital staff is not nearly so great as in the average medical case that comes in for the so-called medical survey. *Prevention of all diseases at their source* through the coöperation of all agencies must be the major objective of every state and local health department. All agencies must recognize their responsibilities and plan their programs accordingly. This admonition applies equally in the simplification and effectiveness of administrative and technical procedures at all levels.

Briefly summarized we should consider the following in planning state and local progams:

1. The resources, personnel and financial, of the state and local groups are seldom adequate to meet the minimum service requirements of each agency. Each can be used to supplement the other through the elimination of duplicate and unproductive programs and more important still to procure more effective and adequate service standards.

2. One agency within a state must be responsible for establishing minimum regulations to be uniformly observed by all agencies in the control and prevention of conditions contributing to excessive or unnecessary morbidity and mortality.

3. The most logical plan for approaching the state problem as a whole is through the establishment of full-time local health departments. The state department should provide some financial assistance to local governments conditional upon the employment and retention of qualified personnel and the carrying out of accepted current practices in the prevention of illness and death. Obviously the state department cannot meet this objective unless legislative provisions are made for providing assistance to local governments and giving responsible state health officials authority to set up reasonable rules and regulations outlining the specific conditions under which grants in aid may be made available to existing local departments and departments that may be organized in the future. Progress will be difficult and slow until stabilization legislation is on the statute books.

4. All personnel must be employed and retained on the basis of individual merit. Elimination of the insecurity of position mainly due to political interference will be the greatest single inducement in getting competent medical, nursing, sanitarian and technically trained workers to seek the public health field as a career. Non-technical workers should also be employed and retained on the basis of merit. Age, basic training, capacity for development, personality—all must be considered in the selection of raw material to be fashioned into a finished worker.

5. The state department through funds available from federal sources is able to provide certain facilities for the training of local personnel who have some evident capacity for further development. The successful school teacher, with a science background, can be developed into an exceedingly valuable sanitarian within a minimum period of time.

6. Since the state agency is considered the parent agency within a given state, it should have personnel of the highest possible type available for local consultant service in the major public health fields. The services of these trained experts should be made available to local directors upon request for assistance in routine or special programs. This type of personnel cannot be employed or retained without some assurance of tenure of office based on meritorious service.

7. The resources of all agencies must be utilized coöperatively in every possible way to bring about a better lay and professional understanding and support of local and state health programs. Financial responsibility must be shared at the local, state and federal levels in accordance with the needs in the respective areas and the resources of the governmental units.

8. Since the medical and allied professions have some very definite responsibility in carrying out public health services, they should in turn be given some responsibility in the formulation of the general policies pertaining to programs at the state and local levels by having adequate representation on state and local boards of health. Direct responsibility for assistance in developing policies will lead to a better understanding of essential objectives on the part of all concerned and will result in a united front against which no opportunist will dare risk his political scalp.

9. Education of lay and professional groups—the simple policy of letting these people know what needs to be done, how it can be done, what we can do about it, what should be done and what is needed to do something about it—takes time but is productive of the most permanent and lasting benefits since these groups which represent the society we serve also provide the means for the establishment and maintenance of the services we direct.

Department of Public Health.

MISCELLANEOUS

COMING MEETINGS AND CLINICS

State Medical Association of Texas, Fort Worth, May 12-15, 1941. Dr. Preston Hunt, Texarkana, President; Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth, Secretary.

American Medical Association, Cleveland, June 2-6, 1941. Dr. Nathan B. Van Etten, New York, President; Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Southern Medical Association, St. Louis, Missouri, November 11-14, 1941. Dr. Arthur T. McCormack, Louisville, Kentucky, President; C. P. Loranz, Empire Building, Birmingham, Alabama, Secretary-Manager.

Texas Allergy Association, Fort Worth, May 12, 1941. Dr. Boen Swinny, Medical Arts Building, San Antonio, President; Dr. Homer Prince, Medical Arts Building, Houston, Secretary.

Texas Ophthalmological and Otolaryngological Society, San Antonio, December 12 and 13, 1941. Dr. E. L. Goar, Houston, President; Dr. Dan Brannin, Medical Arts Building, Dallas, Secretary.

Texas Radiological Society. Dr. M. H. Glover, Wichita Falls, President; Dr. L. W. Baird, Temple, Secretary.

Texas Club of Internists, Pacific Coast, August, 1941. Dr. George Herrmann, Galveston, President; Dr. M. B. Whitten, Medical Arts Building, Dallas, Secretary.

Texas Association of Obstetricians and Gynecologists, Galveston, 1941. Dr. Roy Grogan, Fort Worth, President; Dr. Julius McIver, 1314 Medical Arts Building, Dallas, Secretary.

Texas Pediatric Society, Fort Worth, May 14, 1941. Dr. C. P. Jasperson, Corpus Christi, President; Dr. Frank Lancaster, 4409 Fannin Street, Houston, Secretary.

Texas Neurological Society, Fort Worth, May 12, 1941. Dr. Wilmer Allison, Fort Worth, President; Dr. Melbourne J. Cooper, Nix Professional Building, San Antonio, Secretary.

Texas Railway and Traumatic Surgical Association, Fort Worth, May 12, 1941. Dr. J. D. Becton, Greenville, President; Dr. Ross Trigg, First National Bank Building, Fort Worth, Secretary.

Texas State Pathological Society, Dallas, 1942. Dr. T. C. Terrell, Fort Worth, President; Dr. M. D. Bell, 1109 Medical Arts Building, Dallas, Secretary.

Texas State Heart Association, Fort Worth, May 12, 1941. Dr. Joseph Kopecky, San Antonio, President; Dr. V. E. Schulze, San Angelo, Secretary.

Texas Dermatological Society, Fort Worth, May 12, 1941. Dr. W. A. Smith, Beaumont, President; Dr. Duncan O. Poth, 1230 Nix Professional Building, San Antonio, Secretary.

Texas Surgical Society, Temple, April 7 and 8, 1941. Dr. W. L. Crosthwait, Waco, President; Dr. Walter Stuck, 1426 Nix Professional Building, San Antonio, Secretary.

Texas Orthopedic Society, Fort Worth, May 12, 1941. Dr. W. B. Carrell, Dallas, President; Dr. Ruth Jackson, Medical Arts Building, Dallas, Secretary.

Texas Association of Medical Anesthetists, Fort Worth, May 12, 1941. Dr. Thomas H. Compere, Houston, President; Dr. R. A. Miller, 1415 Nix Professional Building, San Antonio, Secretary.

Texas Society of Gastro-enterologists and Proctologists, Fort Worth, May 12, 1941. Dr. M. O. Rouse, Dallas, President; Dr. Tom E. Smith, 1207 Medical Arts Building, Dallas, Secretary.

Texas Mental Hygiene Association. Dr. Wilmer Allison, Fort Worth, President; Miss Lucille Allen, Highland Park High School, Dallas, Secretary.

Texas Tuberculosis Association, San Antonio, May 5-8, 1941. Dr. E. G. Faber, Tyler, President; J. W. Butler, Galveston, Secretary.

Texas Public Health Association, Corpus Christi, November 3, 4, and 5, 1941. Dr. George A. Gray, Sweetwater, President; Mr. Alan C. Love, Austin, Travis County Health Unit, Austin, Secretary.

Second District Medical Society. Dr. W. V. Ramsey, Abilene, President; Dr. W. T. Sadler, Merkel, Secretary.

Third, Panhandle, District Medical Society, Amarillo, April 8 and 9, 1941. Dr. F. A. White, Childress, President; Dr. H. H. Latson, 301 Polk St., Amarillo, Secretary.

Fourth District Medical Society, San Angelo, October, 1941. Dr. O. H. Chandler, Ballinger, President; Dr. F. T. McIntire, San Angelo, Secretary.

Fifth and Sixth, Southwest District Society, Laredo, 1941. Dr. T. E. Christian, San Antonio, President; Dr. W. W. Bondurant, Jr., 1512 Nix Professional Building, San Antonio, Secretary.

Seventh, Austin District. Dr. Lee Edens, Austin, President; Dr. J. Gordon Bryson, Bastrop, Secretary.

Eighth, Ninth and Tenth District Medical Society, Galveston, April 17 and 18, 1941. Dr. Walter D. Brown, Beaumont, President; Dr. A. A. Ledbetter, Medical Arts Building, Houston, Secretary.

Eleventh District Society, Tyler, 1941. Dr. Clayton Shirley, Tyler, President; Dr. C. C. McDonald, Tyler, Secretary.

Twelfth, Central Texas District Society, Cameron, July 8, 1941. Dr. Howard O. Smith, Marlin, President; Dr. C. G. Swift, Cameron, Secretary.

Thirteenth, Northwestern District Society, Bowie, March 25, 1941. Dr. J. Edward Johnson, Mineral Wells, President; Dr. Charles H. McCollum, Jr., 210 Mid-Continent Building, Fort Worth, Secretary.

Fourteenth District Society, Sulphur Springs, June, 1941. Dr. Joe Becton, Greenville, President; Dr. R. S. Usry, 1835 Garrett, Dallas, Secretary.

Fifteenth, Northeast District Society, Longview, October 14, 1941. Dr. Hugh M. Ragland, Gilmer, President; Dr. J. N. White, Texarkana, Secretary.

CLINICS

Dallas Southern Clinical Society Conference, Dallas, March, 17-20, 1941. Dr. Everett C. Fox, Medical Arts Bldg., Dallas, President; Dr. C. H. Warren, 1133 Medical Arts Bldg., Dallas, Secretary.

New Orleans Graduate Medical Assembly, New Orleans, March 3-6, 1941. Executive office, 1430 Tulane Avenue, New Orleans.

TEXAS STATE PATHOLOGICAL SOCIETY MEETING

The Texas State Pathological Society held its mid-winter meeting January 26, at Baylor University College of Medicine, Dallas, with thirty-six members and associates present, reports Dr. George T. Caldwell, Dallas, retiring president.

The morning session was devoted to the transaction of business of the Society.

Officers for the ensuing year were elected as follows: President, Dr. T. C. Terrell, Fort Worth; vice-president, Dr. D. A. Todd, San Antonio, and secretary-treasurer, Dr. Marvin D. Bell, Dallas (re-elected).

The afternoon session was devoted to a diagnostic tumor seminar during which numerous rare and unusual tumors were studied.

The Society voted to hold its 1942 mid-winter session in Dallas, and another tumor seminar is scheduled for this meeting.

TEXAS NEUROLOGICAL SOCIETY MEETING

The Texas Neurological Society met November 4, 1940, at the Austin State School, Austin, Texas, and the following scientific program was carried out:

Pseudohypertrophic Muscular Dystrophy—C. M. Phillips, M. D., Austin.

Mental Deficiency: Its Diagnosis and Treatment—J. G. Springer, M. D. Austin (read by Mary V. Carroll, M. D.).

Mongolism—E. G. Ward, M. D., Austin.

A Discussion of Present Psychometric Methods—Yale Hicks, M. D., Austin.

Cerebral Palsies Associated with Mental Deficiency—Mary V. Carroll, M. D., Austin.

At the conclusion of the scientific program, members and guests of the Society were guests at a luncheon, compliments of the Austin State School. After the luncheon a tour of inspection of the Austin State School was conducted by Dr. M. I. Brown and his staff.

STATE MEDICAL ASSOCIATION MATERNAL AND CHILD HEALTH COMMITTEE MEETING

The Maternal and Child Health Committee of the State Medical Association met February 22, at the Driskill Hotel, Austin, pursuant to the call of the chairman, Dr. David Greer, Houston. The following members of the committee were present: Dr. Greer, Houston, Chairman; Drs. C. T. Collins, Waco; Edith Bonnet, San Antonio; Allen Stewart, Lubbock, and Ben Andres, Longview; Dr. Preston Hunt, president of the State Medical Association, and Dr. J. M. Coleman, Texas State Department of Health. Members of the State Department of Health staff present were: Dr. George W. Cox, State Health Officer; Dr. A. M. Dashiell, field director, Maternal and Child Health; Dr. Ed Taylor, dental director; Dr. L. B. Harmon, educationist; Miss Mildred Garrett, State supervisor of nurses; Miss Ruth Albrecht, director of nurse education; Miss Elizabeth McGuire, specialist on community organization; Mr. W. R. Bodine, specialist on school environment.

Chairman Greer discussed the duties of the committee, which were considered to include recommendations to the State Medical Association on the basis of the findings as determined by the examination of the program of the Division of Maternal and Child Health of the State Health Department. Dr. Greer requested Dr. Coleman, director of the division,

to introduce the members of the division, with the request that each give a brief summary of his or her duties.

Dr. Coleman confined his discussion to the general philosophy of public health, pointing out that public health has both a preventive and an educational function, that it is more than the prevention of death and disease; that it has a place in contributing to the adequate growth and development of every child. He referred to the progress that had been made during the past four years, during which time the reduction in the maternal mortality rate has resulted in the saving of over 300 mothers per year, and the reduction in the infant mortality rate has meant that over 1,000 children live each year until the first birthday, who would have died during this period four years ago. Dr. Coleman introduced the various members of his staff, who discussed the program.

Dr. Dashiell gave a brief summary of the medical services of the department. He described the Well Child Conference as an instrument used in the public health field to promote the adequate growth and development of children. He pointed out that qualitative as well as quantitative results are desired. In other words, we want better babies, as well as more babies. He referred to the racial group problem, to the terrific Latin-American death rates in tuberculosis and infant mortality from diarrhea and enteritis. He pointed out that fifty-three counties in the state contributed the major portion of deaths in the state. He referred to the fact that the Negro was a particular problem with regard to maternal mortality. Stress was placed upon the need for training special workers in the public health field.

Chairman Greer asked if it was the wish of the department to extend the Well Baby Conference. This was answered in the affirmative by Dr. Dashiell.

Chairman Greer then asked if there was no thought of expanding the preventive activities, such as immunization. It was explained that these activities are developed strictly in accordance with the wishes of the local medical society, and that the program varies from immunization of every child over one year of age by the health department personnel to other areas where all immunization procedure is referred to the private practitioner.

Miss Garrett described the organization of the nursing division, referring to the various types of nurses, including the specialized consultants and the advisory nurses. She pointed out that there are approximately 250 trained public health nurses carrying on the activities of the department in the various sections of the state. She then referred to the variety of activities, showing that each nurse is expected to carry on a generalized program. Stress was laid upon the importance of the selection of nurses and the difficulty to obtain nurses with adequate background for this work.

Dr. Harmon described the educational program, pointing out that in this program an effort is being made to develop a program for the normal child. He pointed out that each specialty is treating the child as if his interests were the child's total entity—by the teacher as a mentality; by the social worker as a social entity; by the physician as a physical entity. In actual fact, the child is a psychophysical entity in action in his environment, and the form of his total development at any time is the product of that action in his environment. His work of necessity must be with the teacher first because the teacher spends more hours with the child in the growth period than do any of the others coming in contact with the child. An effort is made to lead the teacher to the psychophysical concept. The child develops adequately as long as a physical-environmental-psychological balance is maintained. Distortion of development is produced by throwing this balance out. It has been necessary to set up the school program for teachers and administrators in the form of institutes to show the nature of growth and development and to point out that deviation in most cases goes back to some physical factor. In addition to coöperation given to colleges and teacher training institutions, he requested tolerance in the medical field for the activities of the educators. Dr. Greer requested an example. Dr. Harmon pointed out the fact that in certain situations the physical defects producing or produced by certain teaching conditions must be pointed out, referring specifically to some of the opthalmological problems.

President Dr. Preston Hunt, Texarkana, expressed the opinion at this point that it would be necessary in such training to develop specialized teachers, and he pointed out that there was need for parent training as well.

Miss McGuire then discussed the parental approach and the school program. She reported cooperation given to nurseries in the state, county health boards and county commissioners courts and described her activities in providing educational programs, which are used by state-wide agencies, such as the P. T. A. and others.

Mr. Bodine discussed his activities in the light of training teachers to regard the child within the limitations of the environment. He pointed out the importance of the special physical features of ventilation, lighting, hearing, and seating. The child does best when less energy is required to adjust to his environment. If the environment is adjusted to the child's needs then he has energy to put into the work that he is doing, whatever type it may be. In addition, Mr. Bodine's activities are concerned with training teachers to understand the daily inspection and to interpret it not in terms of physical diagnosis in the medical sense, but rather in the educational sense.

Dr. Taylor, dental member of the State Health Department staff, then described the dental program. He reported that the State Dental Society had established a Council of Mouth Hygiene providing for district chairmen in each district and chairmen in each county in the state. The program is largely a voluntary one in which instruction materials are provided by the department and teaching materials are provided for teachers.

A second dental program, which is the principal work of the division, consists of several parts. A full time dentist of the State Health Department staff works in communities, spending approximately half of his time on dental health instruction and half of his time in the correction of defects in indigent children. The method of selection of these children was discussed, the local dental society having a committee to pass on every list and determine indigency. He then described the mobile dental health unit operating in the state, the puppet show and the very interesting study of immunity to dental decay in certain sections of the state. In Deaf Smith County, studies now indicate that this area has the lowest incidence of decaying teeth of any area previously reported. In this area there is fluorine in the water, as well as an increase in calcium and phosphorus in the vegetation and in the milk.

Chairman Dr. Greer thanked the members of the division for presenting their problems and expressed the opinion that more attention should be given in the Texas State Journal of Medicine to the activities of this department, since there are some activities of the State Health Department with which the average physician in the state is unfamiliar. He considered it desirable for the committee to recommend that a page be set aside in each issue of the

JOURNAL, which would include some of the activities carried on by the department. This seemed to be the consensus of opinion of the group.

The first specific subject discussed was the Inter-Professional Commission on Child Development. Dr. Greer recounted his experience in the previous meeting, and at his request Dr. Bonnet read the recommendations of the committee after a brief discussion by Dr. Coleman of some of the plans of that organization.

Upon motion of Dr. Allen Stewart, seconded by Dr. C. T. Collins, the committee voted unanimously to recommend to the State Medical Association the approval of the Inter-Professional Commission for Child Development, and in accordance with the recommendations which provided that the committee on Maternal and Child Health shall represent the association.

The second topic for consideration was that of birth control. Chairman Greer introduced this subject in the light of a letter from the State Chairman, Mrs. Nelms of Houston, and presented a discussion of the subject by Dr. Judson Taylor of Houston.

Dr. Edith Bonnet and Dr. C. T. Collins expressed themselves as highly favorable to the plan of including birth control in the health department activities.

Dr. Ben Andres thought that if physicians limited their families, then indigents should have the same opportunity.

Dr. Collins moved the endorsement of the plan for including birth control in Maternal and Child Health activities of the State Health Department, which motion was seconded by Dr. Bonnet, and carried.

The problem of midwives was reviewed. It was pointed out that 16 per cent of the births are attended by midwives. Dr. Coleman stated the opinion that eventually the midwives should be eliminated, and that some plan should be devised whereby the physician could care for these indigent patients. It was pointed out that the midwives have no legal standing in the state, and as a result there is some confusion as to how far they may go in their activities. He recommended that the State Medical Association appoint a committee to study the problem of the midwives in Texas and recommend some plan which would provide for improvement of this situation.

Postgraduate medical education was then discussed, in the light of the two types—extramural which provides for visits by experts to communities, and the intramural which consists of courses at the medical colleges of the state with fifty dollars tuition and an honorarium of two hundred dollars provided by the state health department. Dr. Greer thought that the intramural program had been satisfactory, but expressed doubt with regard to the refresher courses.

Dr. Stewart thought that neither the material presented nor the plan was entirely suitable.

Dr. Andres thought that the instruction was excellent, but that the program was not reaching the right men.

Dr. Collins expressed the same opinion as Dr. Andres, and Dr. Bonnet had no information with regard to the programs.

President Hunt, because of his considerable experience in this field, was called upon, and he expressed the opinion that the physicians who attended did benefit, but he himself was neutral as to whether the program should be continued.

It was agreed in the committee that this program would be left without specific recommendation, but that the director of the division might present some new plan as desirable.

The Well Child Conference was next considered, and Dr. Coleman stated that he has developed this program strictly in conformity with the wishes of the local medical societies, but inasmuch as it had not previously been presented to the committee, he desired approval. The plan as now provided allows the payment of the fee of five dollars to the physician holding the conference with the understanding that such conferences are preventive and educational and are not intended to be therapeutic. The same applies to the prenatal clinic.

Dr. Bonnet stated that she considered this one of the most important activities carried on by the Health Department. She believed that definite statistical evidence could be produced to show that attendance at the Well Child Conference had led to a change in the management of the home, resulting in marked saving of lives. The committee, on motion of Dr. Bonnet, seconded by Dr. Stewart, gave approval of the plan of the division for Well Child Conferences and Prenatal Clinics.

The final subject for discussion was the diarrhea project being carried on in Hidalgo County. Dr. Dashiell described this plan, which provides hospitalization of children suffering from diarrhea. He showed that in this county 16 per cent of all deaths occur in children under one year of age suffering from diarrhea. The use of the new drug, sulfanilyl guanidine, experimentally was discussed, and it was thought that this might be desirable. Dr. Greer pointed out that the study of this problem might be a very suitable project for the State Pediatric Association, and he suggested that Dr. Bonnet consider this matter with the thought of introducing it at the next meeting of the State Pediatric Association.

The neonatal study being conducted in the Tenth Councilor District was described very briefly by Dr. Coleman and, with the approval of Dr. Cox, the State Health Officer, he indicated the willingness of the department to coöperate with any medical group in the development of any projects along these lines which are intended to reduce mortality and morbidity. He also pointed out the very remarkable response of physicians in filling out the information on the reverse of the birth certificates which are now available.

TEXAS SELECTIVE SERVICE MEDICAL APPEAL AND ADVISORY BOARDS

The Appeal and Medical Advisory Boards of the Selective Service System for Texas are served by the following medical personnel:

APPEAL BOARD

Second District, Dr. P. I. Nixon, San Antonio.
Third District, Dr. C. P. Yeager, Corpus Christi.
Fourth District, Dr. John T. Moore, Houston.
Fifth District, Dr. J. A. Hart, Beaumont.
Sixth District, Dr. E. H. Vaughn, Tyler.
Seventh District, Dr. E. H. Cary, Dallas.
Eighth District, Dr. K. H. Beall, Fort Worth.
Ninth District, Dr. R. L. Vinyard, Amarillo.
Tenth District, Dr. R. B. Homan, El Paso.
Eleventh District, Dr. W. E. Schulkey, San Angelo.
Twelfth District, Dr. H. F. Connally, Waco.

MEDICAL ADVISORY BOARDS

Medical Advisory Board No. 1.—Drs. S. N. Key, James T. Robison, Joe Gilbert, R. T. Wilson, Sandy Esquivel, R. E. Cloud, M. F. Kreisle, L. E. Edens, C. H. Brownlee, all of Austin; Margaret H. Alexander, Taylor.

Medical Advisory Board No. 2.—Drs. E. V. Depew, J. H. Burleson, C. S. Venable, T. M. Dorbandt, R. G. Giles, Lee Rice, W. J. Johnson, and Gus Pagenstecher, all of San Antonio.

Medical Advisory Board No. 3.—Drs. Edward A. Cayo, C. C. Cade, E. M. Sykes, J. A. McIntosh, R. H. Crockett, and Joe Kopecky, all of San Antonio.

Medical Advisory Board No. 4.—Drs. J. T. Ward, J. A. Simpson, Raul de la Garza, R. B. Wright and J. T. Halsell, all of Laredo; C. F. Winfield, Alice; John A. Cook, Cotulla.

Medical Advisory Board No. 5.—Drs. J. G. Webb, Mercedes; B. M. Works, O. V. Lawrence, Brownville; C. J. Hamme, Edinburg; G. Van Amber Brown, McAllen; and C. J. Martin, Rio Grande City.

Medical Advisory Board No. 6.—Drs. Harry Gilbert Heaney, C. F. Crain, C. J. Connor, J. J. Sloan, and William L. McBride, all of Corpus Christi; J. O. Hicks, Victoria; H. C. Eckhardt, Yorktown.

Medical Advisory Board No. 7.—Drs. W. F. Hasskarl, W. A. Knolle, R. E. Nicholson, R. A. Hasskarl, and R. E. Knolle, all of Brenham; A. H. Potthast, Weimar; W. E. York, Giddings; George Pazdral, Somerville; and Gus Levin, Fayettville.

Medical Advisory Board No. 8.—Drs. M. D. Levy, E. L. Goar, Judson Taylor, John B. York, C. M. Griswold, P. V. Ledbetter, C. C. Cody, R. K. McHenry, W. W. Coulter, and William A. Clark, all of Houston; W. B. Veazey, and J. W. Thomason, both of Huntsville; and J. O. Bartel, Conroe.

Medical Advisory Board No. 9.—Drs. William H. Connor, E. W. Bertner, M. L. Graves, James Greenwood, B. T. Vanzant, John H. Foster, J. R. Bost, Fred R. Lummis, and W. W. Ralston, all of Houston.

Medical Advisory Board No. 10.—Drs. W. F. Starley, Titus Harris, A. O. Singleton, D. P. Wall, G. W. N. Eggers, J. B. Johnson, and William F. Spillers, all of Houston; H. H. Loos, and A. S. Morton, both of Bay City.

Medical Advisory Board No. 11.—Drs. William A. Smith, H. E. Alexander, L. H. Ledbetter, H. G. Bevil, Sam Lyons, and C. H. Hendry, all of Beaumont; L. C. Heare and W. E. Crumpler, both of Port Arthur.

Medical Advisory Board No. 12.—Drs. A. E. Sweatland, J. S. Burch, and M. A. Estep, all of Lufkin; T. L. Gardner, Livingston; G. S. Barham, and T. A. Taylor, Nacogdoches; and R. T. Travis, Jacksonville.

Medical Advisory Board No. 13.—Drs. A. C. Scott, Jr., J. S. McCelvey, P. M. Bassel, B. P. Woodson, and R. C. Curtis, all of Temple; and L. C. Carter, Marlin.

Medical Advisory Board No. 14.—Drs. H. R. Dudgeon, Carl Lovelace, I. W. Jenkins, J. R. Maxfield, Sr., F. F. Kirby, and Shelby C. Spencer, all of Waco; and J. E. Boyd, Hillsboro.

Medical Advisory Board No. 15.—Drs. E. P. Norwood, H. H. Panton, J. W. David, J. S. Daniel, Dubart Miller, and E. H. Newton, all of Corsicana; A. L. Hathcock, Palestine; and E. F. Gough, Waxahachie.

Medical Advisory Board No. 16.—Drs. V. R. Hurst, C. C. Adams, and B. A. Swinney, all of Longview; E. G. Faber, Tyler; F. S. Littlejohn and Rogers Coke, both of Marshall.

Medical Advisory Board No. 17.—Drs. Earle Fuller, Preston Hunt, William Hibbitts, F. C. Spinka, R. R. Robins, A. W. Roberts, and George W. Parsons, all of Texarkana; Nowlin Watson, Clarksville; and J. M. Fleming, Mt. Vernon.

Medical Advisory Board No. 18.—Drs. S. D. Whitten and Joe D. Becton, both of Greenville; E. L. Burton, and W. S. Wysong, both of McKinney; D. H. Hudgins, Forney; George F. Powell, and J. W. Scarborough, both of Terrell.

Medical Advisory Board No. 19.—Drs. A. L. Ridings, G. E. Henschen, and I. C. Bates, all of Sherman; R. L. Lewis, and W. W. McCuistion, both of Paris; W. A. Lee, Denison; Priestley Lipscomb, Denton; Talma W. Buford, Minter; and Ernest C. Mead, Gainesville.

Medical Advisory Board No. 20.—Drs. Lee Hudson, D. W. Carter, Jr., Guy Witt, Davis Spangler, W. B. Carrell, W. D. Jones, and Ben H. Griffin, all of Dallas.

Medical Advisory Board No. 21.—Drs. J. M. Martin, C. W. Flynn, B. L. Schoolfield, A. J. Schwenkenberg, H. M. Winans, O. M. Marchman, and Thomas J. Calhoun, all of Dallas.

Medical Advisory Board No. 22.—Drs. William P. Brown, T. C. Terrell, J. H. McLean, C. F. Clayton, W. L. Allison, W. R. Thompson, and Thomas B. Bond, all of Fort Worth.

Medical Advisory Board No. 23.—Drs. W. B. Whiting, M. H. Glover, M. W. Caskey, J. B. Nail, R. L. Hargrave, A. F. Leach, and W. A. Bishop, Jr., all of Wichita Falls; T. G. Rogers, Decatur.

Medical Advisory Board No. 24.—Drs. T. B. Bass, J. M. Alexander, Stewart Cooper, and J. D. McGee, all of Abilene; F. E. Hudson, Dallas Southard, both of Stamford; J. H. Caton, Eastland; C. B. Williams, Mineral Wells; and H. H. Cartwright, Breckenridge.

Medical Advisory Board No. 25.—Drs. George L. Powers, E. A. Rowley, J. J. Crume, G. T. Vinyard, A. F. Lumpkin, J. H. Vaughn, and Walter Shudde, all of Amarillo.

Medical Advisory Board No. 26.—Drs. F. B. Malone, M. C. Overton, C. J. Wagner, V. V. Clark, J. T. Krueger, and J. D. Wilson, all of Lubbock, and Don P. Jones, Plainview.

Medical Advisory Board No. 27.—Drs. A. H. Fortner, C. L. Monk, and C. A. Rosebrough, all of Sweetwater; G. T. Hall, Big Spring; and H. W. Grady Shytles, Snyder.

Medical Advisory Board No. 28.—Drs. Victor E. Schulze, J. S. Hixson, J. H. Smith, C. T. Womack, W. E. Schulkey, Lewis K. Tester, and Charles R. Potts, all of San Angelo; W. A. H. Paige, Brownwood.

Medical Advisory Board No. 29.—Drs. S. E. Thompson, John Dee Jackson, and W. A. Minsch, all of Kerrville; Victor Keidel, and H. G. Pfeiffer, both of Fredericksburg.

Medical Advisory Board No. 30.—Drs. Felix P. Miller, N. H. Keller, J. W. Cathcart, F. C. Goodwin, W. E. Vandevere, Paul McCresney, Leslie M. Smith, Chester D. Awe, A. W. Multhauf, Steve Schuster, and Frank Schuster, all of El Paso.

UNITED STATES CIVIL SERVICE EXAMINATIONS

The United States Civil Service Commission announces examinations to fill vacancies in the following offices in the Public Health Service, Federal Security Agency Food and Drug Administration, Federal Security Agency Veterans' Administration, Civil Aeronautics Administration, Department of Commerce Indian Service, Department of the Interior: SENIOR MEDICAL OFFICER, $4,600 a year; MEDICAL OFFICER, $3,800 a year; ASSOCIATE MEDICAL OFFICER, $3,200 a year. In the branches of Medical Officer and Associate Medical Officer is included an optional branch, "Diagnosis and Treatment of Cancer."

Applications must be filed with the United States Civil Service Commission, Washington, D. C. They will be rated as received until further notice, and certification made as the needs of the service require, except that if sufficient eligibles are obtained, the receipt of applications may be closed, in which case due notice will be given.

A subsequent application will not be accepted from any applicant within three months of the date of receipt of his preceding application under this announcement.

When an applicant who has been rated eligible in this examination for any of the grades listed above files a subsequent application, but is found ineligible for a higher grade than that for which he has been

rated, his application will be canceled and no additional rating will be assigned him in the grade for which he is already eligible.

Applications will be rated as received until further notice.

INFANTS WHO SLEEP WITH EYES OPEN

An infant or young child who sleeps with his eyes partially open may suffer no harmful effects, *Hygeia, The Health Magazine* declares in answer to an inquiry.

"During the first few days of life," *Hygeia* explains, "about 10 per cent of infants sleep with their eyes open or partly shut. At birth all the muscles and the nerves which regulate the activities of these muscles are well developed. The eye itself, however, is comparatively large in proportion to the muscles which guard it. There may be instances in which these muscles are not fully grown to cover the entire eye. During this early period, the condition is of no significance so long as the cornea (the transparent part of the eyeball with the iris and pupil) is not exposed. Usually the eyes roll upward in order that this sensitive part may remain protected from injury or dryness.

"This condition is at times carried over to later childhood without harm to the eye. If it exists beyond the second year, the child should be examined by a competent oculist to ascertain that there are no defects in the muscles or nerves which regulate the opening and closing of the eye."

EDITOR'S NOTE.—A series of such articles as the following, because of their pungency, simplicity of style, obviously prepared for lay consumption, was recently released to the lay press of the State, and widely published. They are being reproduced in the JOURNAL as examples of what can be done to inform the public on important health problems. We are indebted to the San Antonio *Express* for invaluable aid in this particular campaign.

LEAVE 'EM WHERE THEY LIE

How serious is shock?

It is the most serious result of an accident that occurs, and causes more deaths than all other causes combined.

Can shock be controlled?

Yes, and many lives saved; or, if you like, many unnecessary deaths avoided.

Conditions to Meet and What to Do in Shock—Leave 'Em Where They Lie.

How can you control shock?

The right thing to do: stretch the patient out flat on the side of the road and keep keep him warm, covered with coats. Have his head and body sloped downhill. Keep him warm and quiet. Give him a drink of whiskey or coffee if possible. Auto cushions are soft and warm to lie upon. Keep him there (or moved into a nearby house if the weather is bad) until the pulse slows and the skin is dry. Even if an ambulance has arrived, still keep him there. If a leg is broken, keep him there; if his arm or ribs or back are broken, keep him there. If he had a head injury and is unconscious, keep him there until SHOCK is controlled, or improved by keeping still, quiet and warm.

IF he is put in a car and raced through the country, chilled by open windows and handled a lot, he will die, and you will have killed him by exposure, hurry and excitement.

What happens if the shocked patient is not kept quiet, still and warm?

You will increase shock by moving, hurry, exposure and excitement and he will die from shock on the hurried way to the hospital or on arrival.

LEAVE 'EM WHERE THEY LIE:

(Prepared by the Fracture Committee, Texas State Medical Association; sponsored by Texas State Highway Department and Texas Public Safety Commission.)

LIBRARY NOTES

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Requests for packages should be addressed "Library, State Medical Association of Texas, 1404 W. El Paso Street, Fort Worth, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Only one package may be borrowed at a time, and packages are allowed to remain in the hands of the borrower for 14 days.

Package Service

Packages were mailed to the following from the Library of the State Medical Association in February:

Dr. J. Guy Jones, Dallas—*Eyes, wounds and injuries* (15 articles).

Dr. Ernest E. Miller, Beeville—*Fingersucking* (4 articles).

Dr. A. L. Borchardt, Vernon—*Gallbladder, cancer* (13 articles).

Dr. Bernard B. Friedman, Corpus Christi—(6 journals).

Dr. Heinrich Lamm, La Feria—*Ureters, strictures* (8 articles).

Dr. J. L. DeWitt, Mercedes—(1 journal).

Dr. Chas. A. Smith, Texarkana—*Labor, complications* (4 articles).

Dr. Milton Littell, Houston—*Insulin, therapy* (16 articles).

Dr. L. C. Carter, Marlin—*Myxedema, heart in* (13 articles); *Vitamin B* (6 articles).

Dr. R. B. Homan, Jr., El Paso—*Sulfanilamide, in surgery* (15 articles).

Dr. N. H. Keller, El Paso—*Medicine, socialized* (11 articles).

Dr. R. V. Murray, Austin—(1 journal).

Mrs. Marion R. Lawler, Mercedes—*Cancer, prevention* (14 articles).

Dr. Robert F. Thompson, El Paso—*Kidneys, abnormalities* (7 articles).

Dr. Harold T. Nesbit, Dallas—(1 journal).

Dr. Emil Prohl, Tahoka—*Dystrophy, muscular* (21 articles).

Dr. K. E. Miller, Fort Sam Houston—(5 journals).

Dr. Otto Lippmann, Austin—(1 book).

Dr. Ben F. Harrison, Dallas—*Estrogen* (16 articles).

Dr. James E. L. Revely, San Antonio—*Amputation stumps* (6 articles).

Dr. C. R. Finnegan, Dallas—*Dysmenorrhea* (24 articles).

Dr. E. K. Doak, Taylor—*Schools, medical inspection* (13 articles).

Dr. Leroy Trice, Palestine—*Pneumoconiosis* (28 articles).

Dr. George H. Paschal, San Antonio—*Occupational Therapy* (10 articles).

Dr. W. H. Mannheimer, Seguin—*Insanity, puerperal* (7 articles).

Dr. Floyd S. Franklin, Dallas—*Fractures, therapy* (5 articles).

Dr. J. B. Nail, Wichita Falls—*Sulfanilamide, in ophthalmology* (12 articles).

Dr. O. H. Peterson, Corpus Christi—*Angina, Vincent's* (17 articles).

Mr. Joe W. Sheehy, Tyler—*Medicine, socialized* (7 articles).

Mrs. S. H. Watson, Waxahachie—*Louis Pasteur* (5 articles).

Dr. T. M. Hall, Gatesville—(2 journals).

Mrs. Maureen Howie Fain, Austin—(4 journals).

Dr. Borden M. McGee, Rosenberg—*Gallbladder, roentgenography* (30 articles).

Dr. T. D. Young, Roscoe—*Medicine, socialized* (10 articles).

Dr. Robt. H. Mitchell, Plainview—*Venereal Disease, prevention* (9 articles).

Major Thurman A. Kinder, Palacios—*Peptic Ulcer* (25 articles).

Dr. J. E. Smith, Weatherford—*Meningitis, pneumococcic* (20 articles).

Dr. O. M. Marchman, Dallas—(1 journal).

Dr. R. W. Crosthwait, Waco—*Hernia* (13 articles).

Dr. R. Kingsley McHenry, Houston—*Stomach, hemorrhage* (36 articles).

Dr. Ben Andres, Longview—*Undulant Fever* (32 articles).

Dr. R. W. L. Daily, Wichita Falls—*Syphilis, therapy* (12 articles).

Lt. E. A. Maxwell, Camp Bowie—*Fractures, therapy* (16 articles).

Dr. W. B. Russ, San Antonio—*Basic Science* (6 articles).

Dr. Edgar G. Mathis, Corpus Christi—*Vitamins, in diseases of the eye* (13 articles).

Dr. John J. Hinchey, San Antonio—*Bones, blood supply* (3 articles).

Dr. R. B. Alexander, Waco—*Health Examination* (5 articles).

Dr. J. M. Johnson, Longview—*Femur, fractures* (20 articles).

Dr. L. K. Ory, Comanche—*Colitis, ulcerative* (33 articles).

Dr. G. S. Smith, Lubbock—*Arthritis Deformans, therapy* (27 articles).

Dr. M. E. Hastings, Waxahachie—*Communicable Diseases* (12 articles).

Dr. W. A. Grant, Terrell—*Dementia Praecox, therapy* (21 articles).

ACCESSIONS

The American College of Physicians—Its First Quarter Century.

Interscience Publishers, Inc., New York—Reiner: Manual of Clinical Chemistry.

C. V. Mosby Company, St. Louis—Sutton and Sutton: An Introduction to Dermatology, 4th edition; Nygaard: Hemorrhagic Diseases; Bard: MacLeod's Physiology in Modern Medicine, 9th edition.

SUMMARY

Reprints received, 1415.	Local users, 40.
Journals received, 143.	Barrowers by mail, 53.
Items consulted, 118.	Packages mailed out, 54.
Items taken out, 219.	Items mailed out, 662.

Total items consulted and loaned, 999.

NEWS

El Paso City-County Hospital board elected the following officers at a recent meeting: President, Dr. W. R. Jamieson; vice-president, Dr. Hugh White; treasurer, Dr. Will Rogers, and secretary, Mrs. J. I. Driscoll.—*El Paso Herald-Post.*

Denison City Hospital staff elected the following officers at a recent meeting, informs the *Denison Herald*: President, Dr. Paul Pierce; vice-president, Dr. Don Freeman; business manager, Dr. D. K. Jamison (re-elected); and members of the board, Drs. J. A. Mayes, W. A. Lee, W. M. Freeman, A. A. Blassingame, Doak Blassingame and S. O. Levin.

Tentative plans were made for the purchase of new equipment.

Gaston Hospital staff, Dallas, at its first meeting January 13, elected the following officers: President, Dr. Charles L. Martin; vice-president, Dr. Hall Shannon; secretary, Dr. John V. Goode, and members, executive committee, Drs. I. A. Estes, H. M. Winans and Curtice Rosser.—*Dallas Medical Journal.*

The Southwest Medical Foundation board of directors at a recent meeting at the Baker Hotel, Dallas, re-elected the following officers for the ensuing year: President, Dr. E. H. Cary; vice-presidents, E. R. Brown and Karl Hoblitzelle; treasurer, Herbert Marcus; secretary, Dr. Hall Shannon; trustees, Nathan Adams, Jesse Jones, Robert G. Storey, R. L. Thornton and Dr. T. O. Walton.

Members of the board accepted officially a $10,000 gift from Dr. and Mrs. Stanley J. Seegar, for the extension of the new blood bank center in honor of William Buchanan, the father of Mrs. Seegar.—*Dallas Journal.*

British Relief Society, Dallas.—Dr. Ben Rubenstein, Dallas, was recently appointed chairman of the membership committee by the Dallas County Medical Society for the purpose of increasing the medical membership in the British Relief Society, advises the Jewish *American.* Dr. Rubenstein stated that Dallas physicians were responding wholeheartedly and in less than two days more than 100 memberships, ranging in sums from $3 to $500, had been received; that the goal in Dallas County was not less than 600 members and a 100 per cent response was expected. Other members of the medical membership committee are Drs. Paul C. Williams, Charles P. Shuey, John Dunlap, Charles Paternostro and L. E. Allday.

Surgical Instruments Donated to Britain.—A collection of surgical instruments valued at approximately $1,000, recently given by Houston physicians, was turned over to the acting British consul in Houston, who in turn handed them to a master of a British ship with a cargo of American supplies. The ship sailed for England, advises the Houston *Chronicle.* The consul stated that Britain is badly in need of surgical supplies. Her hospitals have been "knocked about so much that a large portion of instruments have been ruined." The donation of instruments will be worth far more to the hospitals than money. Before the instruments were turned over to the consul they had been replated and placed in excellent condition.

Acquisition of Control of John Sealy Hospital by University of Texas Regents Proposed.—A conference of members of the Board of Regents of the University of Texas with the Board of City Commissioners of Galveston and the Board of Managers of the John Sealy Hospital was held recently for the purpose of considering a plan whereby control of that institution would pass completely to the Board of Regents of the University. The proposed change

of control was part of a program to materially expand the teaching facilities of the University of Texas School of Medicine and it is envisioned that new buildings will be constructed and additional medical facilities added.—*Galveston News.*

The Cotton Belt Surgeons Association concluded its 1941 annual conclave at the Hotel McCartney, Texarkana, with the election of the following officers: President, Dr. I. G. Duncan, Memphis, Tennessee; vice-president for Arkansas, Dr. F. W. Youmans, Memphis; vice-president for Louisiana, Dr. John L. Scales, Shreveport; vice-president for Texas, Dr. J. H. Dorman, Dallas; vice-president for Missouri, Dr. Homer Beal, Malden, Missouri; vice-president for Illinois, Dr. W. A. Griffith, East St. Louis; vice-president for Tennessee, Dr. H. B. Jacobson, Memphis, and secretary, Dr. C. E. Kitchens, Texarkana.

Crazy Water Company, Mineral Wells, Given "Cease and Desist" Order.—The Federal Trade Commission recently ordered the Crazy Water Company of Mineral Wells and four of its executives to "cease and desist from misrepresentations" concerning their products, according to an Associated Press item in the Fort Worth *Star-Telegram.* It was asserted that the respondents had advertised in the newspapers and over the radio that their products would "cure or are beneficial in the treatment of many diseases of the alimentary tract" and other organs of the body. The Commission held that "the products possessed no therapeutic value in excess of those of cathartic or laxative, and serve no other purpose than to assist in the temporary evacuation of the intestinal tract and to tend to temporarily neutralize excess acidity."

The Texas Club of Internists met February 14-15, in Houston. The following scientific program was presented by Houston physicians:

Tracheobronchial Lesion in Pulmonary Tuberculosis—Edward A. Wilkerson, M. D.
Esophageal Hiatus Hernia—M. D. Levy, M. D.
Electro-Shock Therapy in Mental Disease (Demonstration)—A. Hauser, M. D., and L. Barbato, M. D.
Chemistry of Kidney Stones—H. O. Nicholas, M. D.
Hyperthyroidism—Ghent Graves, M. D.
What Is the Clinical Value of Gastroscopy?—Dolph Curb, M. D.
Some Aspects of Female Sex Hormones—Karl John Karnaky, M. D.
Cancer of Internal Organs (Cancer of Pancreas, Lungs, and Liver)—Donald G. Henderson, M. D.
Immunity in Intestinal Helminthic Infections—Asa C. Chandler, M. D.
Congenital Aneurysm of Vertebral Artery—L. L. D. Tuttle, M. D., and James Greenwood, M. D.
Recurrent Pneumococcic Meningitis—Charles Reece, M. D., and James Greenwood, M. D.
Familial Periodic Paralysis—Keith Bradford, M. D., and LeRoy B. Duggan, M. D.
A Case of Syringomyelia—Keith Bradford, M. D.
Dermatomyositis—W. W. Henderson, M. D.

During a business session Dr. James J. Gorman, El Paso, was elected to membership.

Tentative plans for holding the next travel meeting at various clinics in Portland, Oregon; San Francisco and Los Angeles were considered.

New officers were elected as follows: President, Dr. George Herrmann, Galveston; vice-president, Dr. Edgar M. McPeak, San Antonio, and secretary-treasurer, Dr. Merritt B. Whitten, Dallas.

Social events in connection with the meeting included a luncheon at the Houston Club; open house in the home of Dr. and Mrs. Moise Levy, and a dinner given at the River Oaks Country Club by Houston members of the organization, the evening of February 14, honoring Dr. N. D. Buie, Marlin, president-elect of the State Medical Association, who was the principal speaker.

Offices Registry Medical Technologists American Society of Clinical Pathologists Moved.—The Registry of Medical Technologists of the American Society of Clinical Pathologists was recently moved from Denver, Colorado, where it has been located since its organization in 1928, to Muncie, Indiana. The occasion for the change in location of the office was the enforced resignation of its chairman, Dr. Philip Hillkowitz, on account of a recent serious illness, who had been its administrator from the beginning. Dr. Lall G. Montgomery, pathologist of the Ball Memorial Hospital, Muncie, Indiana, is the new chairman of the Board of Registry and the offices will be located at that hospital. The Registry suffered an additional loss in the retirement of Mrs. Anna R. Scott, its registrar since the time of its organization. Her untiring and capable services will be missed with those of Dr. Hillkowitz. The newly appointed registrar is Miss Carlita R. Swenson of Philadelphia, formerly associated with the United States Pharmacopoeia.

Since the organization of the Registry, 6,856 technologists have been registered. Spring and fall examinations are held each year for candidates for registration. The Board of Registry now has the added responsibility of investigating and approving schools for the training of medical technologists, and in this work the board has received the valuable assistance of the Council on Medical Education and Hospitals of the American Medical Association, which has assumed the expense and responsibility of making the surveys of the various schools that make application for approval. The success of the work of the Registry has been due in large part to the support given its endeavors by pathologists, hospitals, and educational institutions throughout the country.

John Phillips Memorial Award.—On recommendation of the Committee on Fellowships and Awards, the Board of Regents of the American College of Physicians has voted the 1941 John Phillips Award to Dr. William Christopher Stadie, associate professor of research medicine at the University of Pennsylvania, Philadelphia, for his significant contributions to the knowledge of anoxia, cyanosis and the physical chemistry of hemoglobin, and more especially for his recent studies on the subject of fat metabolism in diabetes mellitus. This award was established by the college October 27, 1929, to be given periodically for some outstanding work in internal medicine, which includes not only clinical science but all subjects which have a direct bearing on its advancement. The award is specifically limited to work done in whole or in part in the United States or in Canada. The recipient must file with the college a written account of his work and present his results in the form of a paper at the next annual session of the college at which time he will be presented the award of a bronze medal by the president of the college.

The Texas Society for Mental Hygiene held its eighth annual meeting February 14, at the Plaza Hotel, San Anonio, with approximately 300 persons present. All of the officers of the Society and fifteen members of its board of directors were in attendance.

The following scientific program was carried out:

Clinical Work with Children—Melbourne J. Cooper, M. D., San Antonio.
(Discussed by Eugene L. Aten, M. D., Dallas Child Guidance Clinic, Dallas, and Marion B. Durfee, M. D., Houston Bureau of Mental Hygiene, Houston.)
Problems of Youth as Seen by a High School Counselor—Miss Lucille Allen, Highland Park High School, Dallas.
(Discussed by Arthur Cunningham, Austin Public Schools, Austin, and J. DeWitt Davis, College of Arts and Industries, Kingsville.)
Education of the Adult—Robert L. Sutherland, Director, Hogg Foundation, Austin.
(Discussed by Miss Bertha Duncan, Texas State College for Women, Denton, and Mrs. Iva C. Gardner, Baylor University, Waco.)
Education for Mental Hygiene—Frank J. O'Brien, M. D., Director of Child Guidance Work in the New York City Public Schools, New York.

During the business session the Society unanimously endorsed the so-called Visiting Teacher Bill scheduled to be introduced during the present session of the State Legislature.

The following officers were elected to serve during 1941: President, Dr. Wilmer L. Allison, Fort Worth; vice-presidents, Dr. T. W. Buford, Pattonville, and Mrs. Robert L. Sutherland, Austin; secretary, Miss Lucille Allen, Dallas; treasurer, Mr. H. L. Pritchett, Dallas; and executive committee, Dr. Paul L. White, Austin, and Mrs. Violet S. Greenhill, Austin.

H. T. Manuel, University of Texas, Austin, was re-elected editor of the Yearbook.

New directors added to the board were: Miss Evelyn M. Carrington, Sam Houston State Teachers College, Huntsville; F. B. Fisher, Superintendent, Corpus Christi Public Schools, Corpus Christi, and F. E. McGahan, President, Lamar County Society for Mental Hygiene, Cunningham.

The International College of Surgeons will hold its Fifth International Assembly in Mexico City, August 10-14, 1941, in response to the invitation of the Mexican Government. With the assembly will be scientific exhibits of the latest advances in surgery and commercial demonstrations of the newest equipment.

Surgeons in the United States desiring information about the presentation of papers or scientific exhibits are requested to query Dr. Desiderio Roman, Chairman of the Scientific Committee, 250 South 17th Street, Philadelphia. Those seeking travel information are advised to communicate with Dr. Max Thorek, International Executive Secretary, 850 West Irving Park Boulevard, Chicago. International President of the College is Dr. Fred H. Albee of New York City and Venice, Florida.

Personals

Dr. C. T. Stone, Professor of Medicine, and *Dr. A. O. Singleton,* Professor of Surgery, University of Texas School of Medicine, were honorees at a stag buffet supper February 5, at the home of *Dr. Marvin L. Graves,* Houston. Guests were limited to members of the Harris County Medical Society. In the evening, Drs. Stone and Singleton were guest speakers at the meeting of the Harris County Medical Society.—*Houston Chronicle.*

Dr. S. B. Hardy was recently named superintendent of the Jefferson Davis Hospital, Houston, filling the vacancy created by the resignation of *Dr. J. H. Stephenson* the past year. Since the resignation of Dr. Stephenson, Dr. Hardy had been acting administrative head of the institution.—*Houston Press.*

Dr. Herbert F. Poyner, Houston, was seriously injured February 6, in an automobile accident advises the *Houston Press.*

Dr. Charles H. McCollum, Jr., Fort Worth, was recently selected to receive the Fort Worth Junior Chamber of Commerce distinguished service award for 1940. Dr. McCollum has served that organization continuously as a director since 1936, is its past president, and has also served as director, treasurer, vice-president and national councilor. He is a former director of the State Junior Chamber of Commerce, having rendered signal service on many of its most important committees and is vice-chairman of the Fort Worth Housing Authority.—*Fort Worth Press.*

Dr. F. W. Lawson of Orange, health officer of that city, came near drowning when he fell accidently into the Sabine River, February 11, while observing the river gauge. He was rescued by a nearby tug. —*Orange Leader.*

Dr. C. B. Young, physician of the Tyler public schools, and active in the Smith County Tuberculosis Association, was recently selected as the outstanding citizen of Tyler for 1940 by the Tyler Junior Chamber of Commerce, because of outstanding public health service.—*Tyler Courier-Times.*

Dr. S. D. Coleman, Navasota, was recently elected president of the Navasota and Grimes County Chamber of Commerce, which he has served for several years as a director.—*Navasota Examiner.*

Dr. Walter G. Stuck, San Antonio, read a paper, "The Prevention of Deformities in Compound Fractures," at the twelfth annual session of the Southeast Surgical Congress meeting in Richmond, Virginia, March 10-12.

Dr. L. S. Oates, Center, was recently elected health officer of Shelby County.—*Tenaha Light.*

Dr. Rennie Wright, New Braunfels, was recently elected health officer of New Braunfels to fill the unexpired term of *Dr. M. C. Hagler,* resigned.—*New Braunfels Herald.*

Dr. R. E. Parris, San Antonio, was recently reappointed chairman of the board of managers of the Robert B. Green Hospital.—*San Antonio Light.*

Dr. Frank Smith, Hemphill, was recently elected health officer of Sabine County.—*Hemphill Reporter.*

Dr. W. A. Newton, Beaumont, was recently appointed health officer for two precincts of Jefferson County.—*Beaumont Enterprise.*

Dr. George A. Gray, director of the Sweetwater-Nolan County Health Unit for the past several years, has been made director of the new Abilene-Taylor County Health Unit.—*Fort Worth Star-Telegram.*

Marriages

Dr. Dudley Y. Oldham, Houston, to Miss Cornelia Cobb, of Longville, Louisiana, October 20, 1940.

Dr. James William Ward, Amarillo, to Miss Nancy Elizabeth Edwards of Nashville, Tennessee, recently.

Dr. J. Markewich, Beaumont, to Miss Florence Herskovitz of Houston, January 19, 1941.

Dr. R. E. House to Miss Annelie Hollister, both of Dallas, January 21, 1941.

Births

To Dr. and Mrs. Gus Schreiber, Jr., Sherman, a daughter, Patricia, September 8, 1940.

SOCIETY NEWS

Bell County Society

December 4, 1940

(Reported by R. C. Curtis, Secretary)

Bell County Medical Society met December 4, at the Kyle Hotel, Temple, with twenty-seven members and three guests present.

H. F. Connally, Waco, Councilor of the Twelfth District, spoke on the crippled children's program in McLennan County. After general discussion of this subject, the committee on crippled children work was asked to continue its investigation and report at the next meeting.

Resolutions of condolence were adopted on the death of Dr. Arthur Carroll Scott of Temple.

New Members.—The following physicians were elected to membership on application: William A. Altman, T. S. Barnes, G. V. Brindley, Jr., C. H. Gillespie, Earl L. Malone and James M. Mattson.

New Officers.—Officers for 1941 were elected as follows: President, W. A. Chernosky; vice-president, Claudia Potter; secretary-treasurer, Raleigh R. Curtis; new member, board of censors, J. B. Brown; delegate, M. W. Sherwood; and alternate delegates, M. P. McElhannon, A. Ford Wolf, and J. W. Pittman.

February 5, 1941

Bell County Medical Society met February 5, at the Deering Hotel, Temple, with twenty-six members present.

An extended discussion of the crippled children's program was had, following which the Society voted unanimously its disapproval of the procedure used in the present program of crippled children's work in the state.

Resolutions of condolence were adopted on the death of Dr. R. W. Noble.

New Members.—Dr. Travis Smith was elected to membership on application.

Big Bend Counties Society

February 11, 1941

(Reported by Joel Wright, Secretary)

Pneumococcus Meningitis: Report of a Case—W. E. Lockhart, Alpine.

Recent Advances in Orthopedic Surgery—Louis W. Breck, El Paso.

Big Bend Counties Medical Society and Auxiliary members were the dinner guests of Dr. and Mrs. L. A. LaVanture at the Paisano Hotel, Alpine, February 11. After the dinner, the scientific program as given above was carried out.

The case of pneumococcus meningitis reported by W. E. Lockhart was discussed by Malone Hill.

The paper of Louis W. Breck was discussed by Captain J. M. Salyer.

Bexar County Society

December 12, 1940

(Reported by W. W. Bondurant, Jr., Secretary)

Military Aspects of Medical Problems—Col. George C. Beach, M. C., U. S. A., Fort Sam Houston.

Ballistics and Gunshot Wounds—Major Elbert DeCoursey, M. C., U. S. A., Fort Sam Houston.

Blood Banks, Dried Plasma and Shock—Lieutenant William B. Tigertt, M. C., U. S. A., Fort Sam Houston.

Presentation of Recruits with Physical Defects—Captain Angvald Vickerson, M. C., U. S. A., Fort Sam Houston.

Bexar County Medical Society met December 12, at the Fort Sam Houston Hospital, with 100 members present. The scientific program as given above was carried out. Each paper received full discussion.

At the conclusion of the program refreshments were served.

January 2, 1941

A Sterilizing Solution for Sharp Instruments—Alfred A. Nisbet, San Antonio.

The X-Ray Appearance of Conditions Simulating Pulmonary Tuberculosis—Edvin F. Lyons, Jr., San Antonio.

Bexar County Medical Society met January 2, in the Medical Library Building, with twenty-four members and two visitors present. The limited attendance was caused by the inclement weather and the nearness to the New Year holiday.

Frank N. Haggard, president, presided and announced the following committee appointments for 1941: *Legislative and Public Health*—Conn L. Milburn, chairman, J. A. Watts, and L. B. Jackson; *Tuberculosis*—R. G. McCorkle, chairman, J. L. Anderson, Henry R. Hoskins, and Charles J. Koerth; and *Venereal Disease Control*—W. A. King, chairman, Byron W. Wyatt, and A. G. Cowles.

Conn L. Milburn gave the report of W. A. King on the Maternity Clinic.

W. A. Reily, section chairman for the evening, presented the scientific program as given above.

A Sterilizing Solution for Sharp Instruments (Alfred A. Nisbet).—Ophthalmologists require sharp instruments and the edges of ophthalmic instruments are easily dulled. The ideal requirements for a sterilizing solution for sharp instruments are: (1) the solution must be antiseptically effective but noncorrosive; (2) not too expensive; (3) usable for storing instruments; (4) stable, and (5) of inoffensive odor.

Four methods now used for sterilizing ophthalmic instruments are: (1) boiling, which will ruin rather quickly the edges of sharp instruments; (2) boiling oil, which requires special equipment, is messy and the oil is difficult of removal; (3) the use of a hot dry oven at 160° C. for thirty minutes; (4) and cold solutions, of which the most commonly used is phenol in from 5 to 25 per cent dilution. The instruments are placed in alcohol after sterilization in the phenol solution following which they are dried. Alcohol is also used. Post's solution contains cresol, petroleum, chloroform and ethyl alcohol; this solution sterilizes in from three to five minutes, but the solution does not kill spores. Post's new solution will corrode handles after two weeks use. Bard-Parker solution contains ethyl alcohol, formalin and water. The fumes from it are annoying and it corrodes instruments.

The solution of the author (Dr. Nisbet) is composed of 2 per cent liquor cresolis compound (50 per cent cresol in clear solution), 2 per cent castor oil (the only fixed oil soluble in alcohol) and 95 per cent alcohol as a base. Bacteriologic tests for its antiseptic value were described. Dr. Nisbet asserts that it meets all his criteria for a good sterilizing agent.

R. E. Scott, in discussing the paper, stated that the phenol coefficient on typhoid bacillus is quite high. The hemolytic Staphylococcus aureus, an organism hard to kill, should be used for testing the antiseptic value of sterilizing solutions. Alcohol alone is a poor sterilizing agent.

Asa Beach stated that he had found the fumes from Bard-Parker solution too annoying, and that metaphen solution had ruined his instruments.

The paper was further discussed by Alvin O. Severance and I. S. Kahn. Dr. Kahn asked why dry sterilization isn't satisfactory.

Dr. Nisbet, in replying, stated that dry sterilization requires too much time.

The X-Ray Appearance of Conditions Simulating Pulmonary Tuberculosis (Ervin F. Lyons, Jr.).—Roentgenograms illustrating many cases of atypical pulmonary tuberculosis, silicosis, carcinoma, fungus disease, pneumonia, cardiac failure, and other interesting chest conditions were exhibited. The importance of the history and physical examination was emphasized.

Herbert Hill asserted that clinical findings are more reliable than x-ray findings in the diagnosis of chest conditions.

I. S. Kahn stated that massive tuberculosis can occur without symptoms.

The paper was further discussed by E. W. Coyle and Henry R. Hoskins.

Other Proceedings.—A communication was read from G. H. Thornhill, state medical consultant for the National Youth Administration. It was voted to invite Dr. Thornhill to address the Society and outline the plan of medical service for clients of the National Youth Administration.

Conn L. Milburn moved that the Society endorse the plan of maternity clinics conducted by the city health department, which motion carried.

Requests for leave of absence from James P. Aderhold and Ernest A. Maxwell were granted by the Society.

A communication was read from the Texas State Board of Medical Examiners.

New Members.—I. C. Skinner was elected to membership on application.

Bowie County Society

December 20, 1940

(Reported by C. A. Smith, Secretary)

Fractures of the Elbow (lantern slides)—S. A. Collom, Texarkana.

Bowie County Medical Society met December 20, at the McCartney Hotel, Texarkana. The scientific program as given above was carried out.

Attention was called to the fact that the Texas Social Hygiene Association is attempting to alter the

venereal disease program carried out in the state and to promote legislation in disharmony with the present program of venereal disease control conducted by the Texas State Department of Health in coöperation with the State Medical Association.

L. H. Lanier presented a resolution urging that physicians examining draftees for local draft boards and advisory boards be paid for such work. It was voted that copies of the resolution should be sent to legislators and to the State Medical Association, and that it be asked that the resolution be adopted as a state project.

New Officers.—The following officers were elected for 1941: President, S. A. Collom; first vice-president, R. C. Cross; second vice-president, J. G. Wilson; secretary-treasurer, C. A. Smith; delegate, J. N. White; alternate delegate, William Hibbitts; and members, board of censors—J. T. Robison and C. E. Kitchens.

January 17, 1941

Surgery of the Colon—S. W. Boyce, Shreveport, Louisiana.
Sinuses in Relation to the Upper Respiratory Tract—Ralph Riggs, Shreveport, Louisiana.

Bowie County Medical Society held a joint supper meeting with the Miller County Medical Society of Arkansas at the McCartney Hotel, Texarkana, with twenty-two members and two guests present.

S. A. Collom, president of the Bowie County Medical Society, presided. The scientific program as given above was carried out.

New Member.—C. H. Frank was elected to membership on application.

William Hibbitts, chairman of the military affairs committee, discussed the need for additional examiners of draftees, and he was instructed by the Society to nominate such examiners.

J. T. Robison and C. E. Kitchens were elected censors for terms of three and two years, respectively.

President Collom announced the following committee appointments: *Legislative*—Preston Hunt, chairman, and R. C. Cross; *Public Relations*—J. N. White, chairman, George W. Parson, and R. W. Pickett; *Military Affairs*—William Hibbitts, chairman, J. T. Robison and C. E. Kitchens; and *Farm Security Administration*—Charles W. Kelly, chairman, and W. V. Bessonette.

Clay-Montague-Wise Counties Society

December 5, 1940

(Reported by W. T. Inabnett, Secretary)

Common Respiratory Diseases of Children with Special Reference to Diagnosis and Treatment—R. L. Nelson, Wichita Falls.
The Etiology and Treatment of Sterility—W. L. Parker, Wichita Falls.

Clay-Montague-Wise Counties Medical Society met December 5, 1940, at Bowie. The scientific program as given above was carried out.

James T. Darwin was appointed by the incoming president to secure the program for the January meeting.

New Officers.—The following officers were elected for 1941: President, E. B. Buchanan, Nocona; vice-president, S. J. Petty, Decatur; secretary, W. T. Inabnett, Decatur; delegates, L. F. Crook and T. G. Rogers; and member, board of censors, Albert Greer.

Dallas County Society

January 23, 1941

(Reported by W. W. Fowler, Secretary)

The Use of Vitamin K in Prenatal and Postnatal Prevention of Hemorrhagic Diseases in the Newborn—Fred S. Bruchsaler, Dallas.
Fluid Administration, When, Why and How—John G. Young, Dallas.
City-County Hospital Care of Juvenile Diabetes—John Dunlap, Dallas.
Chronic Nasal Obstruction in Early Childhood—Ramsay Moore, Dallas.

Dallas County Medical Society met January 23, in the Medical Arts Auditorium, Dallas, with sixty members present. Homer Donald, president, presided and the scientific program as given above was carried out.

The address of Fred S. Bruchsaler on the use of vitamin K in prenatal and postnatal prevention of hemorrhagic diseases in the newborn was illustrated by lantern slides and discussed by John Dunlap.

John Dunlap in discussing juvenile diabetics outlined methods of their care in the city-county hospital.

Other Proceedings.—John G. Young, chairman of the economic relations committee, discussed the functions of the National Youth Administration and outlined a proposed plan for rendering medical service by members of the Society to the clients of the N. Y. A., as submitted by that organization for the consideration of the Society. The National Youth Administration clients range from 17 to 25 years of age and are youths who have graduated from high schools and are unemployed. These youths are trained in different industries by the National Youth Administration until they are able to obtain permanent positions. While undergoing training the National Youth Administration proposes to furnish medical care for them. The plan submitted provides that each youth shall have the choice of physician and each physician the choice of patient. The lists of physicians selected by the Dallas County Medical Society or its economics relations committee, who desire to participate in this service, will be prepared. These physicians will be paid on a hourly or per diem basis and the compensation will be that of the average remuneration in private practice for this class of clientele. The fees paid by the National Youth Administration are $3.00 per hour with a minimum of six hours per week. The sum of $100,000 has been appropriated for medical service of the clients of the National Youth Administration in Texas to be used from the period from February to July, 1941. When the appropriation is exhausted the Society will be notified thirty days in advance of the time payments for medical service are to be discontinued. No physician participating in the proposed plan will be expected to give his services when the funds are exhausted.

On motion of George A. Schenewerk, the Society endorsed the proposed plan and accepted the agreement of the National Youth Administration unanimously.

New Members.—Paul A. Richter, Horace E. Gill, Ken Mooney, C. K. Barta and Joseph Anthony de Haro were elected to membership on application.

The secretary was instructed to pay the dues of the Society in the Dallas County Hospital Council for the year 1941.

A card of thanks from Mrs. C. R. Hannah was read by the secretary.

Resolutions of sympathy were adopted on the death of Dr. C. R. Hannah of Dallas.

February 13, 1941

Summary of Newer Ideas Concerning Pneumonia—H. M. Winans, Dallas.
Intratracheal Suction in Prevention of Postoperative Pneumonia (lantern slides)—Robert Shaw, Dallas.
Pneumonia Complicating Pregnancy (lantern slides)—W. E. Massey, Dallas.
The Value of Roentgen Diagnosis in Pneumonia (lantern slides)—Asa E. Seeds, Dallas.

Dallas County Medical Society met February 13, in the Medical Arts Auditorium, Dallas, with eighty-two members and three visitors present. Homer Donald, president, presided and the scientific program as given above was carried out.

Ben R. Buford gave a discussion of pneumococcus pneumonia.

Abell D. Hardin discussed the use of intratracheal suction and showed lantern slides demonstrating its

bronchoscopic application and of the bronchial tree. Other discussers of the papers presented were R. B. Giles, Bert E. Green, and Donald Slaughter.

Other Proceedings.—J. H. Black, chairman of the public health and legislative committee, reported that a bill was pending in the State Legislature having for its purpose the licensing of chiropractors. The committee had contacted Representatives from Dallas County and found them all favorable to the present medical practice act.

Arthur Schoch, director of the Dallas Syphilis and Venereal Disease Clinic at Parkland Hospital, requested that the consulting staff of the Dallas Syphilis and Venereal Disease Clinic be allowed to accept small, part-time compensation for their services. He gave as his reasons therefor that money is available for this purpose in the funds of the State Health Department, and that the cities in Texas and most other cities in the United States have followed this procedure for several years. The proposal has the approval of the House of Delegates of the American Medical Association, the medical advisory board of Parkland Hospital and the board of managers. Dr. Schoch, himself, would not be included in the group to receive such compensation.

On motion of J. H. Black, the recommendations of Dr. Schoch were approved by the Society.

Ector-Midland-Martin-Howard-Andrews-Glasscock Counties Society

January 16, 1941

(Reported by C. E. Thomas, Jr., Secretary)

New Officers.—Ector-Midland-Martin-Howard-Andrews-Glasscock Counties Medical Society met January 16. the following officers were elected for 1941: President, J. L. Hall, Stanton; vice-president, F. D. Boyle, Big Spring; secretary-treasurer, C. E. Thomas, Jr., Big Spring; member, board of censors, W. E. Ryan, Midland; delegate, G. T. Hall, Big Spring; and program committee—A. L. Absher, Midland; E. K. Thornton, Odessa, and J. M. Woodall, Big Spring.

Gray-Wheeler Counties Society

December 17, 1940

(Reported by G. R. Walker, Secretary)

Lobar Pneumonia—Alex Terrell, Dallas.
Electrocardiography—Oliver Gooch.

Gray-Wheeler Counties Medical Society held a dinner meeting at the Schneider Hotel, Pampa, December 17, 1940, with seven members and their wives present. The scientific program as given above was carried out.

New Officers.—The following officers were elected for 1941: President, C. E. High; vice-presidents, Malcolm Brown and J. W. Gooch; members, board of censors for Gray County—W. Purviance and M. C. Overton; members, board of censors for Wheeler County—H. E. Nicholson and J. Zeigler; secretary, G. R. Walker and delegate, H. E. Nicholson.

Guadalupe County Society

January 14, 1941

(Reported by J. B. Williams, Secretary)

New Officers.—At a meeting of the Guadalupe County Medical Society January 14, the following officers were elected for 1941: President, N. A. Poth; vice-president, R. L. Knolle, Sr.; secretary-treasurer, J. B. Williams; delegate, N. A. Poth; Alternate delegate, Max Brandenberger; and board of censors—Max Brandenberger, Carl Raetzsch, and V. P. Randolph.

The committee on legislation is composed of the following: A. I. Heinen, Max Brandenberger and R. L. Knolle, Jr.

Harris County Society

December 18, 1940

(Reported by Hugh C. Welsh, Secretary)

Harris County Medical Society held its annual business meeting for the election of officers December 18, with 162 members present. Alvis E. Greer, president, presided.

Communications from Judson L. Taylor and the Post Graduate Medical Assembly of Southwest Texas were read.

Amendments to the constitution and by-laws discussed by Alvis E. Greer, J. F. Gamble, L. C. Blair and J. M. O'Farrell were adopted unanimously on motion of J. M. O'Farrell, seconded by J. T. Billups.

Reports were received from the following boards and committees: *Board of censors,* C. M. Arner; *board of medical economics,* F. R. Lummis; *adjudication committee,* J. E. Clark; *legislation and public health committee,* secretary; *entertainment committee,* E. W. Bertner; *sick and relief,* Martha A. Wood; *program committee,* secretary; *building committee,* Reese Blundell; *venereal disease committee,* E. R. Seale; *historical committee,* W. A. Coole; *social hygiene committee,* Lucile Robey; *representative of the Houston Safety Association,* Allen McMurrey; *representative of the Ripley Settlement House,* E. W. Bertner; *representative of the Board of Industrial Health, Chamber of Commerce,* Herbert Poyner (on motion of J. M. O'Farrell the Society gave a vote of thanks to Dr. Poyner for his services); *Houston Recreation Council,* Ruth Hargraves; *military affairs committee,* P. R. Stalnaker, discussed by Ralph Bowen; *committee to investigate the Tri-City Welfare League's plan for venereal disease clinic,* B. T. Vanzant; *finance committee,* C. C. Cody; *treasurer's report; secretary's report,* Hugh C. Welch; *president's address,* Alvis E. Greer.

New Members.—W. D. Oliver and L. H. Sherrill were elected to membership.

L. J. Taubenhaus, a new member, was introduced by President Greer.

New Officers.—The following officers were elected for 1941: President, J. H. Wootters; president-elect, C. M. Warner; vice-president, Hugh C. Welch; secretary, Ed T. Smith; treasurer, J. T. Billups; new delegates, Alvis E. Greer, M. B. Stokes, and E. L. Goar; alternate delegates, Gary Turner, Ghent Graves, Peyton Barnes, E. R. Seale, H. J. Ehlers, C. D. Kerr; member, board of censors, J. G. Heard; members board of medical economics—Frank J. Iiams, H. A. Petersen, and A. T. Talley; and members adjudication committee—C. S. Gates and Charles Reece.

Hunt-Rockwall-Rains Counties Society

January 14, 1941

(Reported by M. L. Wilbanks, Secretary)

Diagnosis and Treatment of Pellagra—H. M. Bradford, Greenville.
Treatment of Pneumonia—E. L. Rippy, Dallas.

Hunt-Rockwall-Rains Counties Medical Society met January 14, in the Municipal Building, Greenville, with W. M. Dickens, president, presiding. The scientific program as given above was carried out.

Diagnosis and Treatment of Pellagra (H. M. Bradford).—Pellagra is a chronic, endemic disease characterized by a complexity of cutaneous, gastrointestinal and nervous symptoms with seasoned exacerbations and remissions, and a tendency to terminate in dementia and exhaustion. Although multiple cases are frequently observed in a single household, there is no evidence that pellagra is either hereditary or contagious. The more obvious manifestations of pellagra appear first in the spring, although they are almost always preceded for weeks or even months by less pronounced disturbances, such as lassitude, muscular weakness, vertigo, head-

ache, epigastric discomfort, flatulence and pyrosis. The nervous symptoms of the early stages consist chiefly of neurasthenia with melancholy moods and muscular cramps. The late nervous symptoms are extremely varied. Profound mental depression, retardation of psychic functions, exaggeration of the tendon reflexes, ataxia and spastic paralysis are also met with. In severe cases there are hallucinations of sight and hearing. Dementia or a condition simulating general paralysis may occur. The diagnosis in the fully developed or classical case can hardly ever be mistaken, but the recognition of the disease is not infrequently difficult because cases of classical type form but a small proportion of the total.

Since the introduction of vitamin B there has been a great change in the management of deficiency diseases. Vitamin B or nicotinic acid are indicated in pellagra. The diet of pellagrins is important. An abundant diet of milk, bread, lean meat, eggs, fresh fruits, and vegetables is extremely valuable in restoring pellagrins to health, but the diet should always be supplemented with vitamin B therapy. In cases in which there is a skin eruption and in advanced cases, Dr. Bradford had found helpful the use of neoarsphenamine in small doses repeated at weekly intervals until three injections had been given. Hydrochloric acid therapy had also been found to be decidedly beneficial. The paper was discussed by W. P. Philips and N. J. Atkinson.

TREATMENT OF PNEUMONIA (E. L. Rippy).—The treatment of pneumonia depends upon its etiology and should be considered under general measures and specific measures. The general measures are directed to the special care of the patient and the specific treatment is directed against the causative agent of the disease.

In the general management, the energy of the patient should be conserved by moving him as little as possible. Special nursing care is especially desirable. Fluid content should be maintained so that the urinary output is at least 1,500 cc. daily. Fluids may be given parenterally in the form of normal saline and with 5 per cent glucose, if vomiting is present. While food is not of major importance for the pneumonia patient, the diet should be high carbohydrate with low residue and a liberal amount of sodium chloride and vitamin C is advantageous. Milk should be avoided as it contributes to abdominal distention. The barbiturates are recommended to relieve anxiety and to provide sufficient rest. Morphine should be avoided. The constipation accompanying the disease should respond to enemata and mild laxatives. Digitalis should not be given routinely, but should be given to patients who are already receiving digitalis and to those who develop cardiac decompensation during the course of pneumonia. Oxygen should be used only in the cases of patients who develop cyanosis.

Specific treatment includes the use of specific antipneumococcic and serum therapy. Experience at Parkland Hospital, Dallas, apparently indicates that sulfapyridine is the drug of choice. Prior to the use of chemotherapy, the following laboratory work should always be done: (1) a complete blood count, (2) urinalysis, (3) sputum study for the identification of the pneumococcus if present and for typing, and (4) blood culture.

Chemotherapeutic agents seem to be contraindicated in the cases of patients who have had anemia, granulopenia, and in the cases of patients with severe kidney disease. The initial dose of sulfapyridine is 30 gr., which is followed by 15 gr. every four hours, day and night, for four or five days or until from 16 to 25 Gm. have been given. This dosage should prove adequate in the average case. The great disadvantage of the drug is the nausea and vomiting that it may cause but which are not contraindications to its use. When advisable sodium sulfapyridine may be given intravenously, the dose to be calculated on the basis of 0.06 Gm. per kilogram of body weight for each individual dose. The dose may be repeated every nine to twelve hours in a 5 per cent solution. This preparation is available commercially with instructions for its administration.

Good authority recommends the use of antipneumococcic serum in conjunction with sulfapyridine when treatment is begun after the third day; when two or more lobes are involved; when the patient is more than 40 years of age; when the patient is pregnant or in the first week of puerperium, and when the blood culture is positive.

The paper was discussed by J. C. Cheatham, H. M. Bradford, Joe Becton and M. L. Wilbanks.

Other Proceedings.—W. N. Dickens and H. W. Maier were selected to fill vacancies on the venereal disease clinic staff in Greenville on the nomination of E. P. Goode.

L. T. Waller was selected to be in charge of the venereal disease clinic in Commerce on the nomination of C. G. Allen, seconded by W. P. Philips.

Jefferson County Society

February 10, 1941

(Reported by G. L. Butler, Secretary)

Carcinoma of the Large Bowel (motion picture and lantern slides)—A. O. Singleton, Professor of Surgery, University of Texas School of Medicine, Galveston.

Jefferson County Medical Society met February 10, at St. Mary's Hospital, Port Arthur, with T. A. Fears, president, presiding. The scientific program as given above was carried out.

The address of Dr. Singleton was discussed by L. C. Powell, S. T. Wier, E. C. Ferguson, H. B. Eisenstadt, T. A. Fears, E. H. Lindsey, S. T. Lewis, J. W. Long, W. A. Smith, T. C. Walker, and W. G. Wallace.

W. A. Smith reported that a dermatitis caused by a filler used in broadcloth was prevalent. The dermatitis had occurred on the abdomen, scrotum and penis of affected patients. Numerous cases had been reported by the public health service, which had asked manufacturers to recall the material containing this filler.

Other Proceedings.—President Fears announced the appointment of the following members of the military affairs committee: T. A. Tumbleson, chairman, D. M. English, and J. W. Long.

New Member.—H. T. Kaufman was elected to membership.

Karnes-Wilson Counties Society

January 14, 1941

(Reported by E. L. Tiner, Secretary)

Diagnosis and Laboratory Findings of Pneumonia—A. O. Severance, San Antonio.

Treatment of Pneumonia—Joe Kopecky, San Antonio.

Karnes-Wilson Counties Medical Society met January 14, at Kenedy. The scientific program as given above was carried out.

New Officers.—Officers for 1941 were elected as follows: President, C. M. Kent; vice-president, C. W. Archer; secretary-treasurer, E. L. Tiner; delegate, C. C. Quillian, and alternate delegate, J. W. Oxford.

LaSalle-Frio-Dimmit Counties Society

January 21, 1941

(Reported by B. E. Pickett, Jr., Secretary)

New Officers.—LaSalle - Frio - Dimmit Counties Medical Society at a regular meeting, January 21, elected the following officers for 1941: President, J. M. Crawford, Carrizo Springs; vice-president, Elmer Howard, Pearsall, and secretary-treasurer, B. E. Pickett, Jr., Carrizo Springs.

Milam County Society

December 12, 1940

(Reported by C. G. Brindley, Secretary)

The Conduct of Normal Labor, Vertex and Breech Presentations (motion picture)—T. F. Bunkley, Temple.
Electrocardiography (motion picture)—T. L. Denson, Cameron.

Milam County Medical Society met December 12, at Cato's Cafe, with eight members and four guests present. Following a turkey dinner, the scientific program as given above was carried out, with T. S. Barkley, president, presiding.

The motion picture film on electrocardiography, shown by T. L. Denson, was furnished through the courtesy of the General Electric Company.

New Officers.—Officers for 1941 were elected as follows: President, T. L. Denson; vice-president, W. R. Newton; secretary-treasurer, Roy G. Reid; delegate, C. G. Swift (re-elected); and alternate delegate, W. R. Newton (re-elected).

Stephens-Shackelford-Throckmorton Counties Society

January 2, 1941

(Reported by D. J. R. Youngblood, Secretary)

New Officers.—Stephens-Shackelford-Throckmorton Counties Medical Society at a regular meeting January 2, 1941, elected the following officers for the ensuing year: President, C. A. Turner; vice-president, G. C. Wood; secretary, D. J. R. Youngblood; delegate, P. C. Wray; alternate delegate, W. S. Parks, and member board of censors, W. B. Guinn.

Tarrant County Society

January 21, 1941

(Reported by W. P. Higgins, Jr., Secretary)

Regional Ileitis (motion picture)—George R. Enloe, Fort Worth.
Differential Diagnosis of Regional Ileitis—R. J. White, Fort Worth.
Medical Service for the National Youth Administration—G. H. Thornhill, State Medical Consultant, Austin.

Tarrant County Medical Society met January 21, in the Medical Arts Auditorium, Fort Worth, with sixty-seven members and eight visitors present. The scientific program as given above was carried out and discussed by T. H. Thomason and R. G. Baker.

G. H. Thornhill, State Medical Consultant for the National Youth Administration was introduced by R. B. Anderson. Dr. Thornhill gave a discussion of the agreement entered into between the Council on Medical Economics of the State Medical Association and the National Youth Administration for medical service of clients of the N. Y. A. in Texas. If the county medical society should care to participate in the program, participating physicians would be compensated for the work done.

After discussion by R. B. Anderson, Tom B. Bond, R. H. Gough, and S. J. R. Murchison, the Society voted to approve the agreement between the Council on Medical Economics of the State Medical Association and the National Youth Administration on motion of E. L. Howard, seconded by Sim Hulsey.

Other Proceedings.—Giles W. Day, chairman of the membership committee, urged members to pay dues early.

W. S. Ossenfort, Medical Officer in Charge of the United States Public Health Service Hospital, Fort Worth, extended an invitation to members of the Society to attend a scientific program and entertainment to be given by the staff of that hospital January 31.

The attendance prize, colored motion picture films, was won by W. R. Thompson.

Following adjournment motion pictures, "Biology of Conception," and "Mechanism of Contraception" were shown through the courtesy of the Birth Control Clinical Research Bureau, New York.

February 4, 1941

Pancreatic Lithiasis with Diabetes—T. H. Thomason, Fort Worth.

Tarrant County Medical Society met February 4, in the Medical Arts Auditorium, Fort Worth, with fifty members and three visitors present.

The scientific program as given above was carried out. The discussion of Dr. Thomason's paper was opened by May Owen, and further discussed by Bert Ball, R. J. White, W. C. Tatum, William L. Howell and H. O. Deaton.

New Members.—The following physicians were elected to membership on application: Elbert Munsey Cyrus, Jr., Sam Hefner Dryden, Wesley Newton Jenkins, George Volney Launey, Jr., Alexander David Major, Walter B. Petta and Wendell Weston Sumner.

Resolutions of respect and condolence were adopted on the death of Mrs. Katharine R. Anderson, wife of Dr. R. B. Anderson, Fort Worth.

I. P. Barrett, chairman of the public health advisory committee, discussed a plan whereby school physicians for a period of two years would make tuberculin tests on all school children whose parents would request it, and asked the endorsement of the Society for the procedure, it being understood that at the end of the two-year period if the practice did not prove satisfactory it would be discontinued. Following discussion by Bert Ball, W. L. Howell, and Sim Hulsey, the Society voted to endorse the plan as proposed.

The secretary announced that a communication from the Secretary of the State Medical Association had been received, urging members who had not already done so to execute and return their questionnaires pertaining to medical preparedness at the earliest possible date.

Secretary Higgins asked members to report all errors in the Society's album, in order that they may be corrected.

Bert Ball described a plan to assist in collecting delinquent accounts. Briefly, the plan would consist primarily of an advertisement to be sponsored and paid for by the Clearing House Association of Fort Worth, whereby banks would lend money to patients to pay for professional services if physicians and dentists would discount a sufficient amount to cover the interest of such loans. The question of whether or not the physician or dentist would be a co-signer on the note would be optional. The plan had not been approved by the Clearing House Association but was to be submitted to them for consideration.

A. Keller Doss discussed the proposal of a small claims court for collecting delinquent accounts.

Following discussion, it was moved by Craig Munter, seconded by H. O. Deaton, that both proposals be referred to the committee on medical economics, which motion carried.

CHANGES OF ADDRESS

Dr. C. C. Adair, from Bailey to Bonham.

Dr. A. Baldwin, from Olney to Philadelphia, Pennsylvania.

Dr. Wm. M. Barron, from San Antonio to Ackerman, Mississippi.

Dr. A. J. Bonham, from Nordheim to Cuero.

Dr. C. Burke Brewster, from Fort Worth to Brownwood.

Dr. R. E. Bullard, from Waco to El Paso.

Dr. J. S. Calhoun, from Meridian to Walnut Springs.

Dr. Helen Cannon-Bernfield, from Tombstone, Arizona, to San Antonio.

Dr. Frank Cone, from Houston to Fort Brown, Brownsville.

Dr. W. B. Everitt, from Cleveland to Fostoria.

Dr. Ellen D. Furey, from San Antonio to San Angelo.
Dr. D. F. Gray, from Mesa, Colorado, to CCC Camp, Sunbeam, Colorado.
Dr. J. T. Greenwood, from Jacksonville to Route 1, Ponta.
Dr. J. M. Hardy, from Gainesville to Camp Bowie, Brownwood.
Dr. G. A. Hart, from Dallas to Camp Bowie, Brownwood.
Dr. W. W. Hawkins, from Waco to Fort Ringgold, Rio Grande City.
Dr. T. C. Honea, from Cleburne to Camp Bowie, Brownwood.
Dr. M. H. Jensen, from Winters to Austin.
Dr. Seth W. Kellam, from Menard to San Antonio.
Dr. A. A. Koch, from Bishop to Ingleside.
Dr. George S. Littell, from Dallas to San Antonio.
Dr. R. W. Loveless, from Lamesa to Camp Bowie, Brownwood.
Dr. J. F. Lubben, Jr., from Dallas to Camp Bowie, Brownwood.
Dr. Oscar Marchman, Jr., from New York City to Longview.
Dr. Melvin Marx, Jr., from Clarksville to Camp Hulen, Palacios.
Dr. J. J. Moch, from Dallas to Longview.
Dr. T. M. Oliver, from San Antonio to Camp Bowie, Brownwood.
Dr. John B. Peyton, from Dallas to Fort Sam Houston.
Dr. Gardner D. Phelps, from San Antonio to Chicago, Illinois.
Dr. P. A. Reitz, from Pittsburg to Fort Sill, Oklahoma.
Dr. George F. Rozelle, Jr., from Trudeau, New York, to Dallas.
Dr. G. W. Sansom, from Houston to George West.
Dr. R. C. Stokes, from Vernon to Randolph Field.
Dr. A. I. Tasch, from Dallas to Taft.
Dr. Harold R. Thomas, from Austin to Dallas.
Dr. Kenneth Walborn, from Sulphur Springs to Dallas.
Dr. W. B. West, from Fort Worth to U. S. Naval Air Station, Corpus Christi.
Dr. U. H. Zehnpfennig, from Merkel to Fort Sill, Oklahoma.
Dr. J. L. Austin, from Rockwall to Apple Springs.
Dr. Lewis Barbato, from Houston to Galveston.
Dr. Mary Bedichek Carroll, from Galveston to Austin.
Dr. D. W. Davis, from George West to San Antonio.
Dr. W. R. Deatherage, from Dallas to Camp Hulen, Palacios.
Dr. A. L. Delaney, from Liberty to Fort Crockett, Galveston.
Dr. B. H. Denman, from Houston to Port Arthur.
Dr. Charles B. Dildy, from Austin to Camp Bowie, Brownwood.
Dr. C. A. Duran, from San Diego to Victoria.
Dr. A. S. Epperson, from Cameron to Houston.
Dr. F. S. Ewing, from Sinton to San Antonio.
Dr. R. L. Futrell, from Falls City to Jefferson.
Dr. Harold Giddings, from El Campo to Kings Ranch, Kingsville.
Dr. Robert J. Hanks, from Sanatorium to Waco.
Dr. R. J. Jaehne, from Austin to Fort Sam Houston.
Dr. W. B. Lasater, from Mineral Wells to Fort Clark, Brackettville.
Dr. Ben L. Lerner, from Houston to San Antonio.
Dr. Jessie Alice Lockhart, from Dallas to Sanatorium.
Dr. Philip Magrish, from San Antonio to Camp Hulen, Palacios.
Dr. Ernest A. Maxwell, from San Antonio to Camp Bowie, Brownwood.
Dr. Walter S. Miller, from Laredo to Camp Grant, Rockford, Illinois.
Dr. Walter H. Moursund, Jr., from Dallas to Fort Sam Houston.
Dr. D. E. Packard, from Kerrville to Camp Grant, Rockford, Illinois.
Dr. O. M. Phillips, from Fort Worth to Camp Bowie, Brownwood.
Dr. J. B. Robbins, form El Paso to Fort Sam Houston.
Dr. Paul Q. Stansell, from San Antonio to Fort Bliss.
Dr. M. I. Steckler, from Houston to Fort Bliss.
Dr. J. E. Stover, from Friona to Stamford.
Dr. George James Stuart, from Dallas to Washington, D. C.
Dr. James B. Stubbs, from Sweetwater to Camp Grant, Rockford, Illinois.
Dr. Earl F. Tritt, from Sells, Arizona to Dulce, New Mexico.
Dr. O. Jay Waddell, from Denton to Randolph Field.
Dr. C. E. Webb, from El Paso to Parris Island, South Carolina.
Dr. C. D. Winborn, from Dallas to Camp Bowie, Brownwood.
Dr. James H. Wooten, Jr., from Fort Worth to Camp Wallace, Hitchcock.

AUXILIARY NOTES

Officers of the Woman's Auxiliary to the State Medical Association of Texas: President, Mrs. William Hibbitts, Texarkana; honorary life president, Mrs. A. C. Scott, Sr., Temple; president-elect, Mrs. S. F. Harrington, Dallas; first vice-president, Mrs. H. Leslie Moore, Dallas; second vice-president, Mrs. A. E. Moon, Temple; third vice-president, Mrs. A. B. Pumphrey, Fort Worth; fourth vice-president, Mrs. Joe B. Foster, Houston; recording secretary, Mrs. Walter A. Minsch, Kerrville; publicity secretary, Mrs. W. F. Armstrong, Fort Worth; treasurer, Mrs. J. Frank Clark, Abilene; parliamentarian, Mrs. J. W. Tottenham, Brownwood; and corresponding secretary, Mrs. Ralph Cross, Texarkana.

Notice.—The subscription cost of the *Bulletin* of the Woman's Auxiliary to the American Medical Association, issued quarterly, is $1.00 annually. Every Auxiliary member should have it. It contains interesting, informative material about activities of the Woman's Auxiliary throughout the United States. Subscriptions should be sent to Mrs. F. F. Kirby, State Auxiliary Bulletin Chairman, 2801 Sanger Avenue, Waco, Texas. Subscribe now.

AUXILIARY ORGANIZATION

The principal function of the Organization Chairman and the fifteen Councilwomen of the State Auxiliary is to organize new auxiliaries and increase the membership of those already organized.

A desire for authentic health information is one good reason for more auxiliaries to sponsor public relations activities and more auxiliary members to help educate the American people to realize that they neither need nor want socialized medicine.

We need every eligible woman, who has not joined the Auxiliary, to help bring the medical viewpoint on health problems to lay groups. Also, these women need us, our friendship, our interest and our pleasure in working with the greatest profession on earth.

We beg the coöperation of the president of each county auxiliary and every auxiliary member in reaching our goal—"Every Doctor's Wife a Member."

MRS. H. LESLIE MOORE,
Chairman, Organization.

AUXILIARY PUBLIC RELATIONS

The purpose of the Public Relations Committee is to weld a closer understanding between the laity and the medical profession.

Let me describe a person I think is a good public relations committee member. This person is well-informed herself. She searches for the incorrect information given to the public and finds some means of refuting it. She does this subtly by furthering the radio health programs of the American Medical Association and the local County Medical Society; by contact with lay organizations, procuring health literature and health speakers for them; by friendly relations with her local newspaper staff, and all other sources of public information. Ever ready for service, this tactful, pleasant person is one of the community's most useful citizens.

This is a picture of every good Auxiliary member. The chairman of the Public Relations Committee of the State Auxiliary merely marshals this work for the state organization.

Mrs. D. F. Kerbow,
Chairman, Public Relations.

AUXILIARY NEWS

Bowie-Miller Counties Auxiliary met January 24, at the home of Mrs. Roy F. Baskett, Texarkana, with Mrs. Joe Tyson, president, presiding.

Dr. Preston Hunt, president of the State Medical Association, delivered an address, "How the Auxiliary Serves the Medical Profession."

Following a brief business session guests were invited to the dining room where Mrs. William Hibbitts, president of the State Auxiliary, presided at the table and poured tea.

Co-hostesses with Mrs. Baskett were Mesdames Decker Smith, B. C. Middleton and H. E. Longino.

Dr. W. W. Bauer, Director of the Bureau of Health Education of the American Medical Association and associate editor of *Hygeia*, the Health Magazine, delivered addresses to the following groups in Texarkana, February 11, under the auspices of the Bowie-Miller Counties Auxiliary: Texarkana Rotary Club; Texarkana College Assembly; Arkansas High School Assembly, and a public meeting at the Congregational Church. Dr. Bauer pointed out that there is no inadequacy of medical care in the United States, that medical care in this country is the best in the world and no group of Americans fail to secure medical care simply for lack of money if they will only avail themselves of their opportunities and stop spending money on quack remedies and quack doctors. Dr. Bauer counselled his audience not to exalt the laboratory above the physician, for "behind the machine is a man," and the machine is only as good as the man behind it, only as good as the man behind it understands its limitations. Dr. Bauer asserted that "there is no best doctor for any disease," but "there is a best doctor for particular patients." The patient-physician relationship is of vital importance in diagnosis and it is for this reason that the American Medical Association does not want the government to come between the doctor and his patient. Dr. Bauer interspersed his interesting, informative discussion with numerous humorous observations concerning diet fads and baldness. He also pointed out that there is no such thing as a problem child, but problem adults and problem teachers are in great abundance. Dr. Bauer warned that the American people are suffering with a combination of "mineral madness," and "vitamin jitters." He decried the exploitation of vitamins and other food fads, gave sound advice on cancer prevention and control and cautioned against the serious danger of medically unsupervised weight reduction by women.

Dr. Bauer's appearance in Texarkana under the auspices of the Auxiliary was in celebration of Doctor's Day. In the evening of February 14, he was the special guest of honor at an informal reception honoring members of the Bowie and Miller county medical societies and Bowie-Miller Counties Auxiliary, at the Hotel McCartney. Members of the entertainment committee in charge of this function were the hospitality and public relations committees, consisting of Mesdames Ralph Cross, Roy Baskett, Harry Murry, William Hibbitts, H. E. Longino, S. A. Collom, Jr., J. T. Robison, W. Decker Smith and Reavis Pickett.

Mrs. Allen Collom, Jr., was general chairman of arrangements for Doctor's Day. Early in the day Mrs. Harry Murry and Mrs. Ralph Cross had placed flags on the graves of deceased members of the county medical societies.

Brazos-Robertson Counties Auxiliary observed Doctor's Day on December 17, 1940, with a Christmas dinner in the Maggie Parker Dining Room at Bryan, honoring the husbands of members. Twelve physicians and their wives were present for the dinner and Christmas tree which followed, with gifts being distributed to all present.

Mrs. S. B. Slaughter presided over the program.

Mrs. W. M. Boguskie gave the welcome address, to which Dr. Boguskie responded. Group singing was enjoyed.—Mrs. T. A. Searcy, corresponding secretary.

Brazos-Robertson Counties Auxiliary met January 21 in the Maggie Parker Dining Room, Bryan, for a luncheon meeting.

Mrs. William Hibbits, president of the State Auxiliary, was an honor guest and gave an inspiring address on the purpose of the Auxiliary and practical points on the public relations problems of the Auxiliary. Twelve members and three guests were present.—Mrs. T. A. Searcy, Corresponding Secretary.

Brown-Comanche-Mills-San Saba Counties Auxiliary met February 10.

Mrs. B. F. Cadenhead was welcomed as a new member.

Mrs. A. A. Ross, Lockhart, a member of the Caldwell County Auxiliary, was a guest.

A program on cancer control was planned for the March meeting, with Mrs. A. A. Ross in charge.

Officers for the new year were elected as follows: President, Mrs. Joe R. McFarlane; first vice-president, Mrs. H. B. Allen; second vice-president, Mrs. B. F. Cadenhead; recording and corresponding secretary, Mrs. W. H. Paige; treasurer, Mrs. J. W. Tottenham; publicity, Mrs. H. L. Lobstein, and parliamentarian, Mrs. J. M. Horn.—Mrs. J. W. Tottenham.

Dallas County Auxiliary held a luncheon meeting November 6, 1940, at the Dallas Country Club, Dallas, honoring Mrs. William Hibbitts, Texarkana, president of the State Auxiliary, and county auxiliary presidents of the Fourteenth District.

After luncheon, Mrs. Hibbitts addressed the Auxiliary.

A skit entitled "Medicine of the Future" was enacted by Auxiliary members.

In the afternoon of November 6, Mesdames O. M. Marchman, J. H. Marshall and H. Leslie Moore entertained with a tea honoring Mrs. William Hibbitts, president of the State Auxiliary; Mrs. S. F. Harrington, Dallas, president-elect of the State Auxiliary, and Mrs. Ramsey Moore, president of the Dallas County Auxiliary.—Mrs. Robert L. Moore.

Dallas County Auxiliary held its February luncheon meeting at the Dallas Country Club.

President Mrs. Ramsay Moore appointed the following nominating committee: Mrs. Earl Carter, chairman; Mesdames L. S. Thompson, James T. Montgomery, G. F. Goff and Karl B. King.

Mrs. James T. Montgomery, chairman for the British War Relief Society, announced that Auxiliary members would serve in the sewing room each Thursday from 9:00 a. m. to 12:00 noon. Mrs. Gordon B. McFarland, program chairman, presented Herbert Marcus in a spring clinic.

Dr. Gladys Ogilvie, New York, who spoke on the "Importance of Figure Control," demonstrated the hula as an excellent posture exercise.

Mrs. J. L. Touchstone served as a model for a coiffure.—Mrs. Robert L. Moore.

Henderson County Auxiliary observed annual "Doctor's Day" by honoring physicians of Henderson County with a banquet at the Henderson County Woman's Club, with Mrs. Robert Hodge, president of the Auxiliary, as general chairman. Dr. W. W. Bauer, director of Health Education for the American Medical Association and associate editor of *Hygeia, the Health Magazine,* was guest of honor, and after the dinner addressed a large public audience at the Presbyterian Church. Dr. Bauer's address was interesting and instructive. He referred to the thousands of questions directed to the Bureau of Health Education of the American Medical Association each year and the sincere effort on the part of that organization to give helpful information to the public on health. He decried food fads and fallacies.

Hidalgo-Starr Counties Auxiliary held a joint dinner meeting with the Hidalgo-Starr Counties Medical Society at the Casa de Palmas Hotel, McAllen, December 12, 1940. After dinner the Auxiliary held a separate meeting with eight members and two guests present. Mrs. G. Van Amber Brown presided.

Mrs. William Hibbitts, Texarkana, president of the State Auxiliary was the guest speaker. Mrs. Hibbitts spoke on "Over-organization."

Mrs. H. E. Whigham was in charge of the entertainment and introduced Miss Clara Finch, who gave several clever readings.

Mrs. Joe W. May, Donna, gave a review of "The Fight for Life" by Paul de Kruif.

Mrs. J. G. Webb, Mercedes, and Mrs. C. J. Hamme, Edinburg, gave reports of the South Texas District Auxiliary meeting in Houston recently.

Hidalgo-Starr Counties Auxiliary held a joint dinner meeting with the Hidalgo-Starr Counties Medical Society in the banquet room of the Hotel Edinburg, Edinburg, Texas, January 9, 1941. After dinner the Auxiliary met separately in the parlors of the hotel, with Mrs. G. Van Amber Brown, president, presiding. Twelve members and two guests were present.

Mrs. D. C. Hyder, program chairman, introduced Mrs. R. W. Pearson of Donna who reviewed the book, "And There Were None" by Agatha Christie.

Mrs. J. B. Ivy of Weslaco read a paper on the subject, "London's Medical Situation in the Present War," in which she depicted the manner in which the medical profession, medical students of the twelve medical colleges of London, nurses and other hospital attendants are carrying on bravely under extremely adverse conditions.

Members were asked to bring a guest to the February meeting to assist in a membership drive.

Reports showed that practically all of the junior high schools of Hidalgo County will compete in the essay contest sponsored by the Auxiliary on the subject, "Increasing the Span of Life."

Jefferson County Auxiliary observed "Doctor's Day" by honoring the widows of deceased Jefferson County physicians at the February luncheon meeting. Mrs. J. I. Young, Port Arthur, president, presided.

Mrs. Edward Ferguson, program chairman, presented Mrs. W. H. Giese, a guest, who was the principal speaker.

Mrs. Hugh E. Alexander was general chairman for the luncheon and the hostesses were Mesdames F. Peel Allison, John Carter, Eugene Lindsay and Dudley English.

Widows of deceased physicians honored were: Mesdames J. M. Gober, Felix Martin, Guy Reed, J. D. Blevins, J. B. Mitchell, W. F. Taliaferro, L. Goldstein, D. W. Dunn, H. B. Pedigo, Ida B. Barr, J. B. Cruse, W. D. Grimes, Hessie Bishop, S. D. Wall, Edgar V. Henry and A. S. Pollock.

Tarrant County Auxiliary celebrated State President's Day with a luncheon February 14, at Rivercrest Country Club, Fort Worth, with Mrs. William Hibbitts, Texarkana, president of the State Auxiliary, as honor guest. Other out-of-town guests included Mrs. Ramsey Moore, president of Dallas County Auxiliary and Mrs. S. F. Harrington, Dallas, president-elect of the State Auxiliary.

Mrs. Joseph F. McVeigh, president of the Tarrant County Auxiliary, presided.

Hostesses were Mesdames Frank Beall, J. D. Covert, Holman Taylor, C. P. Hawkins, S. A. Woodward and Will S. Horn.

Tom Green Eight County Auxiliary met February 3, at the Massie Clubhouse, San Angelo, with fifteen members and one guest present.

Mrs. Frank Meadows reviewed "Cocks Must Crow" by Marjorie Kinnan Rawlings.

Mrs. Harlan Horney, president, conducted a brief business session and appointed Mrs. D. D. Wall and Mrs. J. G. Rushton to secure a speaker for the health program of the City Council of Parent-Teacher Associations for April.

Mrs. Lewis K. Tester and Mrs. W. D. Anderson were named to have charge of the Auxiliary's sale of tickets to the style review February 28, sponsored by the City Federation of Women's Clubs.

Mrs. J. P. McAnulty was received as a new member.

A social hour followed, with Mesdames J. Marvin Rape, G. W. Nibling and F. Leon Hutchins as hostesses.—Mrs. Lewis K. Tester.

CORRECTION

In the announcement of the hot lunch room project of the Tom Green Eight County Auxiliary in a Mexican school in San Angelo, published in the January number of the JOURNAL, it was stated that the lunch room began operation December 10 and that the project would be continued until January 1. The annnouncement should have stated that the project would be continued until June 1.

Washington County Auxiliary met recently at the Hotel St. Anthony, Brenham, with Mrs. C. E. Southern, president, presiding. Mrs. Southern, delegate to the South Texas District Auxiliary meeting in Houston, gave a report of that meeting at which Mrs. Robert A. Hasskarl of Brenham was installed as district president, Mrs. T. O. Woolley, Brenham, as corresponding secretary, and Mrs. C. E. Southern as treasurer.

The Auxiliary voted to give a year's subscription to *Hygeia* to the high school and central school libraries.

Mrs. T. O. Woolley read a paper on the use of sufanilamide, in which the danger of self-medication by the laity with this drug was pointed out, and the necessity for careful supervision by a physician when it is being taken.

The following officers were elected to serve during the ensuing year: President, Mrs. N. D. Jarrell, Somerville; vice-president, Mrs. W. F. Hasskarl, Brenham; recording secretary, Mrs. Fred Graber; treasurer, Mrs. George Zeiss, Brenham; parliamentarian, Mrs. C. E. Southern, Burton; press reporter, Mrs. N. L. Schiller, Brenham, and historian, Mrs. Arthur Becker, Brenham.

BOOK NOTES

[1]**Sex and Internal Secretions.** A Survey of Recent Research. Editor, Edgar Allen, Yale University. Associate Editors, Charles H. Danforth, Stanford University and Edward A. Doisy, St. Louis University, with Forewords by Robert M. Yerkes, Yale University. Cloth, 1,346 pages. Price, $12.00. The Williams & Wilkins Company, Baltimore, 1939.

In 1932, following ten years of research on the fundamental problems of sex initiated by the Bureau of Social Hygiene under the administrative guidance of a committee of the Division of Medical Sciences, National Research Council, the first edition of this work was published. In that volume, Dr. Edgar Allen, of Yale University, organized, upon invitation, a coöperative survey covering the various advances in the field of internal secretions in relation to sex. He gathered together investigators outstanding in the fields of biology, physiology and psychobiology. The first edition served well its purpose, and a second printing was necessary in 1934. Only five years after publishing the first edition, it was thought necessary to have a second edition because of the continued new discoveries in the field; consequently, a second edition was published in 1939, still under the editorship of Dr. Allen with Drs. Charles H. Danforth and Edward A. Doisy as co-editors. As in the first edition, outstanding authors, twenty-four in number, have each contributed a chapter in his own way, assuming full responsibility for the contents of his own section, including also discussions of the work of other investigators.

This volume contains 1,346 pages with an extensive bibliography following each chapter. The subject matter is presented under five sections. Section (A) treats of the biological basis of sex, emphasizing the cytological and genetic basis of sex, embryonic development with emphasis upon the modification of sex in the lower vertebrates and mammals, as well as modification of the secondary sexual characteristics in birds.

Section (B) deals with the physiology of the sex glands, germ cells and accessory organs. In discussing the biology of the testes, Dr. Carl R. Moore cites many interesting investigations dealing with castration and testis transplants. In evaluating the androgenic substance he concluded that "the analysis of the contributing factors in reproductive activity are but in the beginning." In the chapter on endocrine functions of the ovaries, Dr. Allen and his associates deal at considerable length with various factors concerning the oestrus cycle and the various interglandular relationships, especially the hormone influence affecting the primary and secondary sexual characteristics. Many interesting experiments in the lower animals and monkeys allowed for a comparative research study. Some inference is made to the therapeutic value of the estrogens and probable influence of the sexual glands of internal secretion upon the "sexual drive" of mating instincts. The remainder of the section is devoted to the study of ovulation, fertilizations, the transport and viability of eggs and spermatozoa, and problems of endocrine functions in pregnancy.

A chapter on biochemistry and assay of gonadal hormones designates intense research with some conclusions rapidly becoming of clinical value.

Section (D) deals with the hypophysis and the gonadotropic hormones of blood and urine in relation to the reproductive system. A fine job is done in reviewing the literature which has appeared over a period of some ten years, resulting in some fairly basic formulations and concepts, which will enable future investigators to proceed in a more direct line in a phase of internal secretions still far from understood.

In Section (E) mention is made of the thymus and pineal glands, with a well rounded symposium of their relations to sex. A chapter is also devoted to the influence of vitamins on the sex glands, although very few conclusions are reached. The concluding chapters deal with sex drive and sex functions in man and are well worth careful study and acceptance. It concludes by emphasizing the importance of psychobiological approach requiring consideration of the total organism rather than a partial or individual approach. At the conclusion of the volume is a table which includes practically all of the commercial preparations used in clinical therapy. The extensive table only emphasizes the difficulty which faces the physician in the treatment of sexual dysfunctions.

This book will continue to serve as an excellent reference book for problems dealing with sex and endocrine glands, and it will certainly appear in future editions.

[2]**Synopsis of Materia Medica, Toxicology, and Pharmacology.** For Students and Practitioners of Medicine. By Forrest Ramon Davison, B. A., M. Sc., Ph. D., M. B. Assistant Professor of Pharmacology in the School of Medicine, University of Arkansas, Little Rock. Fabrikoid, 633 pages with 45 illustrations, including 4 in color. Price, $5.00. The C. V. Mosby Company, St. Louis. 1940.

This text is brief and leans toward the clinical application of the uses of drugs. On occasion it is so brief that important facts are omitted. This is, of course, to be expected in such a review type of book.

The section on prescription writing is "old fashioned" and includes many points which make the writing of prescriptions by the student somewhat of a bore.

Especially to be commended are the tables comparing effects of different drugs in a special class. Also the chemical formulae are an important addition to this text and make for a better understanding of certain molecular effects.

The treatment of poisoning takes for granted a considerable knowledge of drug action and this is a drawback.

The author has a new classification of drug action, *i. e.*, those acting directly on muscle. The inclusion in this group of such drugs as digitalis and pituitrin makes this a rather confusing chapter.

On the whole, however, the author presents a well rounded-out text and has accomplished quite well the goal which he sets for himself in the preface. On the other hand a well prepared synopsis could have been shorter.

[3]**Office Urology.** By P. S. Pelouze, M. D. Assistant Professor of Urology, University of Pennsylvania; Consulting Urologist, Delaware County Hospital; Special Consultant to the United States Public Health Service. Cloth, 766 pages with 443 illustrations, 19 in color. Price, $10.00. W. B. Saunders Company, Philadelphia and London, 1940.

It is rare to find a medical writer so gifted as an author that he can write a medical treatise that will maintain the reader's interest like a novel. "Office Urology" is such a book. The author covers all the urological conditions that are seen by a busy urologist. Particular attention is given to symptoms and diagnostic methods and such treatments as may be carried out in one's office. The surgical procedures are not discussed in this book, and the reader is

[1]Reviewed by Arthur J. Schwenkenberg, M. D., Dallas, Texas.

[2]Reviewed by Donald Slaughter, M. D., Dallas, Texas.

[3]Reviewed by Jo C. Alexander, M. D., Dallas, Texas.

referred to other standard books on urological surgery.

This book should be of utmost value to the medical student and the general practitioner who must see and advise patients with urological symptoms before they are seen by the specialist limiting his practice strictly to the field of urology. Of special value to any physician are the chapters on history taking, examination of the patient and office procedures.

The sexual problem which is so vastly misunderstood by the average physician is covered in a clear, understandable manner and if the suggestions given by Dr. Pelouze were carried out by physicians coming in contact with sexually unfortunate individuals, the divorce courts would have fewer cases on their dockets.

The different lesions seen at cystoscopy are minutely described and very capably portrayed by well executed drawings.

A book of this type has been needed for a long time and no one in America is better fitted than the author to fill the need because he has devoted many years solely to office urology. He writes from his experience and gives in detail the diagnostic method and the treatments that he is using daily in his own office.

[4]**Vitamin Therapy in General Practice.** By Edgar S. Gordon, M. D., M. A. Associate in Medicine and Instructor in Physiological Chemistry, University of Wisconsin, and Elmer L. Sevringhaus, M. A., F. A. C. P. Professor of Medicine, University of Wisconsin; Editor, Department of Endocrinology, The Year Book of Neurology, Psychiatry and Endocrinology. Cloth, 258 pages. Price, $3.00. The Year Book Publishers, Inc., Chicago, 1940.

This book presents for the physician in compact, easily read form most of the worth while knowledge concerning the vitamins. Perhaps in no other field of medicine do quackery, faddism, and erroneous enthusiasms reach such preposterous heights as in this. Hence, the sane, orderly presentation of proved facts concerning the specific therapeutic actions of the known vitamins places this little book on the "must" reading list of all general and special practitioners.

Controversial and experimental aspects of the studies of vitamins are not dealt with in detail. The known structural formulae are presented. A short history of the discovery of each of the vitamins is given. The physiologic and pathologic phenomena are presented. The clinical significance of deficiency states are well elucidated. Then the sources and human requirements are listed. Finally the therapeutic applications of these vitamins in the specific diseases in which effective results may be obtained are given.

Drs. Gordon and Sevringhaus are making a sincere effort to keep the profession informed in the field of vitamin therapy and the foreword should be reviewed.

I think the reviewer should compliment the publishers for a handsome volume.

[5]**Hugh Young.** A Surgeon's Autobiography, with over 100 drawings by William P. Didusch and three color prints. Cloth, 538 pages. Price, $5.00. Harcourt, Brace and Company, New York, 1940.

The importance of an autobiography is determined by who writes it. Hugh Young is very important to American medicine and his account of his experience as a doctor and useful citizen produces an inspiring volume.

He has written in a very readable style interspersed with humor, pathos and audacity. His is an authentic success story and one in which his associates and friends take pride.

The chapters dealing with some of his contributions to medical practice appeal to the sympathetic understanding by the layman of the difficult problems which good doctors are trying to solve. The section dealing with the first world war reveals how important the less dramatic phases of medical service are to the success of an army in the field. It reveals how men may be protected against themselves and is important in our present mobilization of another army.

Not the least important part of the book deals with the high standards demanded in the education of his assistants in their training for the specialty of urology. They are trained as doctors first and specialists afterwards.

Dr. Young has made the profession proud of him and of itself. His book will be a source of inspiration everywhere for years to come.

[4]Reviewed by Lee Rice, M. D., San Antonio, Texas.
[5]Reviewed by Frank S. Schoonover, M. D., Fort Worth, Texas.

DEATHS

Dr. J. M. Daly of Abilene, Texas, died January 6, 1941, in an Abilene hospital, of influenza.

Dr. Daly was born August 16, 1873, in Orillio, Ontario, Canada. At an early age he moved with his family to North Dakota and his academic education was received in the schools of that state and in Chicago, Illinois. His medical education was obtained in the Medical Department of the University of Arkansas, from which he was graduated in 1897. Dr. Daly had for many years limited his work to the specialty of eye, ear, nose and throat. He had lived and practiced medicine at Abilene, Texas, since 1900.

DR. J. M. DALY

Dr. Daly was a member continuously in good standing of the Taylor County Medical Society and after its reorganization of the Taylor-Jones Counties Medical Society, State Medical Association and American Medical Association from 1907 until his death. He was an earnest student of medicine and for many years had devoted a certain period of time each year to postgraduate study in various clinical centers. He was oculist for the Texas and Pacific Railway at Abilene. During the first World War he served as an eye, ear, nose and throat specialist on the medical advisory board of his section of the State. He was held in high esteem by his medical associates and the general public.

Dr. Daly was a member of the Episcopal Church, a Mason, Knight Templar, and a member of the

Shrine. He was an ardent sportsman and loved out-door life.

Dr. Daly was married to Miss Myrtle Byron Norton of Bucyrus, Ohio, in 1900. He is survived by his wife and four sisters, Mrs. M. F. Mullins, Minneapolis, Minnesota; Mrs. Emily D. La Prairie, Los Angeles, California; Mrs. A. O. Davis, Poplar, Montana; Mrs. Mary Farrell, Edgecomb, Washington.

Dr. Charles David Dixon of San Antonio, Texas, died January 11, 1941, in a San Antonio hospital, of heart disease.

Dr. Dixon was born September 9, 1872, in San Marcos, Texas, the son of Rev. B. F. and Vashti Hargis Dixon. His preliminary education was received in the public schools and the Jordan Institute at Lockhart. His medical education was obtained in the Tulane University School of Medicine, New Orleans, and the Jefferson Medical College, Philadelphia, Pennsylvania, from which latter institution he was graduated in 1892. He began the practice of medicine at Junction, Texas, where he remained for three and one-half years. He then removed to San Antonio, where he had been in active practice for thirty-five years. He had not been active in the past two years because of ill health.

DR. CHARLES D. DIXON

Dr. Dixon was a member of the Uvalde County Medical Society while residing at Junction and of the Bexar County Medical Society, State Medical Association and American Medical Association after his removal to San Antonio. Early in his medical career he took postgraduate work at the Chicago Eye, Ear, Nose and Throat College, following which he limited his practice to that specialty. He had also taken postgraduate work at the New York Polyclinic and in the Eye, Ear, Nose and Throat Hospital, New Orleans. Dr. Dixon was a past president of the Bexar County Medical Society and of the San Antonio Board of Health. He was a member of the Southern Medical Association. He was a member of the staffs of the Santa Rosa Hospital and Robert B. Green Hospital, San Antonio. He had rendered professional services to the Salvation Army Home and the Mexican Christian Institute and Home of Neighborly Service. He was a Major in the Medical Corps of the United States Army during the World War. At the time of his death he was a Lieutenant Colonel in the Medical Reserve Corps of the Army. Dr. Dixon was elected an honorary member of the State Medical Association in 1933, which membership status continued until his death. Dr. Dixon was a member of the Baptist Church, a York and Scottish Rite Mason and a member of the Shrine.

Dr. Dixon was versatile in his talents, being an artist and author. He excelled in landscape paintings. Among his published works is a book deserving special mention, "The Menace, Quackery Nostrum Exploitation and Reminiscences of a Country Doctor." He was fond of out-door life, hunting and fishing. He was a cultured physician beloved by all who knew him.

Dr. Dixon was married to Miss Lela Mae Beasley of Gonzales, Texas, in 1893. He is survived by his wife; a son, Dr. Carroll B. Dixon, a dentist of San Antonio; two brothers, W. M. Dixon, El Paso, and L. C. Dixon, Jones County, Texas; and four sisters, Mrs. J. A. Hatcher, Mrs. Arthur Hayes, and Mrs. Urban Moore, Lewisville, and Mrs. J. R. King, Pleasanton.

Dr. Owen Carpenter Elliott of Elm Mott, Texas, died January 3, 1941, in a Waco hospital, following a brief illness.

Dr. Elliott was born December 17, 1854, in Amandaville, Kentucky. He came to Texas with his family in 1870 and located in Bell County, at Troy. His academic education was received in public schools in Kentucky and Texas and Burkesville Christian College, Burkesville, Kentucky. His medical education was obtained in the Louisville Medical College, from which he was graduated in 1893. He had also studied at the old Fort Worth Medical College and had taken postgraduate work at Tulane University School of Medicine. Dr. Elliott had lived and practiced at Troy, Prairie Hill, Bosqueville, Waco, and Elm Mott, his entire period of practice having extended for approximately fifty years. He had practiced in Elm Mott and surrounding communities for twenty-eight years.

Dr. Elliott was a member many years of the McLennan County Medical Society, State Medical Association and American Medical Association. He was one of the founders of the McLennan County Tuberculosis Association and had served as a member of the executive committee of the McLennan County Red Cross Chapter. For many years he was president of the public school board of Elm Mott. He was a member of the Christian Church, which institution he had served in an official lay capacity. He was a member of the Masonic order and held an award for fifty years' membership in this fraternal group. He was a typical family physician who gave unceasingly of his talents to his community as physician, civic leader, and family adviser. He was sincerely beloved by his clientele.

Dr. Elliott was married to Miss Mary Ellen Paul in 1882. His wife preceded him in death March 11, 1938. He is survived by a daughter, Mrs. Leta H. Shelton, Daytona Beach, Florida; a son, Dr. Edwin A. Elliott, Regional Director, National Labor Relations Board, Fort Worth; one sister, Mrs. Locke Bonner, Chickasha, Oklahoma; and four brothers, A. C. Elliott, El Paso; Frank Elliott, Nashville, Tennessee; Richard Elliott, Ranger, and Dr. W. G. Elliott, Riesel, Texas.

Dr. W. A. Harper of Austin, died January 3, 1941.

Dr. Harper was born February 11, 1868, in Ladonia, Texas, the son of George Washington and Elizabeth Harper. His academic education was received in the public schools and the University of Texas, Austin. His medical education was obtained in the University of Nashville, from which he was graduated in 1896. He began the general practice of medicine at Austin, but after two years specialized in eye, ear, nose and throat work at Johns Hopkins, Baltimore, and the New York Polyclinic. He was in active practice in his specialty in Austin until his last illness and death.

Dr. Harper was for many years a member of the Travis County Medical Society, State Medical Association and American Medical Association. He served as vice-president of the State Medical Association from 1910 until 1911 and as councilor of the

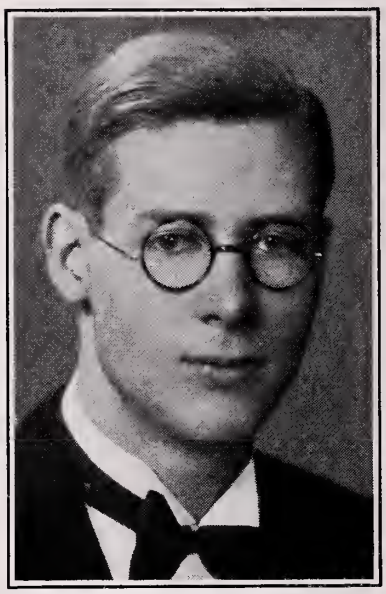
Seventh District of the Association from 1911 to 1913. He was oculist for the State School for Deaf, Dumb and Blind for Colored Youths and the Confederate Home at Austin. He was a member of the staff of the Seton Infirmary for a number of years and from point of service was one of the oldest practitioners in Austin. In his early years he took an active interest in county, district and State Medical Association work. During the first World War he served as a medical examiner for the local draft board.

Dr. Harper was prominently identified as a realtor in the city of Austin. He was a member of the city zoning board at the time of his death, a position he had held since its organization. In the past nine years he had not missed a single meeting of the board. He was particularly interested in an orderly plan for city development and was credited by real estate associates as having done more than any other single person to make Austin a beautiful city of homes. Dr. Harper was a member of the Presbyterian Church, which he had served as trustee and elder. In past years, he had been active in the Rotary Club, Elks Lodge and Knights of Pythias.

Dr. Harper was married June 18, 1901 to Miss Perle Perkins of Brenham, who survives him.

Dr. Henry Towne Safford, Jr., of El Paso, Texas, died January 12, 1941.

Dr. Safford was born June 5, 1905, in El Paso, Texas, the son of Dr. Henry Towne and Margaret (Niles) Safford, the descendant of a long line of physicians, with nine generations of physicians on his father's side. His academic education was received in the University of Texas, Austin, and Ohio State University. His medical education was obtained in the University of Maryland School of Medicine, Baltimore, from which he was graduated in 1929. After his graduation he served an internship in the Union Memorial Hospital, Baltimore. His specialty was proctology, to which he had limited his work in El Paso for the past ten years. He was a member of the Phi Chi medical fraternity.



DR. HENRY TOWNE SAFFORD, JR.

Dr. Safford was a member continuously in good standing of the El Paso County Medical Society, State Medical Association and American Medical Association, from 1931 until his death. He was also a member of the Midwest Proctologic Society, the American Proctologic Society, and the Southwestern Medical Association. He served the El Paso County Medical Society as chairman of its program committee in the year 1939-1940. He was a First Lieutenant in the Medical Reserve Corps of the United States Army from 1932 to 1934. He was a member of the Episcopal Church.

Dr. Safford was held in the highest regard by his medical associates as an excellent student of medicine, a sound thinker and an expert and judicious operator. He was unselfish, generous and devoted to his profession. He was beloved by his patients and was possessed of unusual qualities of character. He had achieved a high place in his profession in his ten years of practice.

Dr. Safford was married to Miss Helen Robinson of El Paso, September 8, 1928. He is survived by his wife; a daughter, Helen Romaine; a son, Franklin Robinson; his parents, Dr. and Mrs. H. T. Safford, and two sisters, Mrs. C. D. Belding and Mrs. Ben R. Howell, all of El Paso.

Dr. Mark L. Stricklin of Clarendon, Texas, died January 6, 1941, from injuries received when his automobile plunged into a canyon on a curve, while returning from a professional call.

Dr. Stricklin was born March 8, 1882, in Alexander, Texas, the son of Monroe and Candice Stricklin. His academic education was received in Baylor University, Waco. His medical education was obtained in the Baylor University School of Medicine, Dallas, from which he was graduated in 1910. He had practiced medicine at Seldon, Terrell, Gustine, and Groesbeck, prior to his location in Clarendon in 1931. He had been in active practice in the latter city until his untimely, accidental death. During the first World War he served in the Medical Corps of the United States Army, attaining the rank of Captain and being stationed from 1917 to 1919 in a field hospital with the American Expeditionary Forces in France and the Army of Occupation at Coblenz, Germany.

DR. MARK L. STRICKLIN

Dr. Stricklin was for many years a member of the State Medical Association and American Medical Association through the county medical societies of his various places of residence and was in good standing in these organizations at the time of his death. He served the Donley-Armstrong Counties Medical Society as president continuously from 1936 to 1940, inclusive. He had served the city of Clarendon as health officer. He was held in the highest esteem by his medical associates and the community in which he lived and practiced.

Dr. Stricklin was a member of the Baptist Church, a Mason, and a member of the Kappa Psi fraternity.

Dr. Stricklin was married August 23, 1910, to Miss Iun Dingler of Comanche, Texas. He is survived by his wife; a son, Guy Mike Stricklin, Clarendon; a brother, Dr. Guy Stricklin, Clarendon, with whom he was associated in practice; and two sisters, Mrs. Charles Williams, Comanche, and Mrs. B. R. Long, Houston.

Texas State Journal of Medicine

EDITORIAL OFFICES: 1404 W. El Paso Street, Fort Worth, Texas
HOLMAN TAYLOR, B. S., M. D., EDITOR-IN-CHIEF
R. B. ANDERSON, JR., A. B., M. D., ASST. EDITOR

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Vol. XXXVI **April, 1941** **No. 12**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

The Fort Worth Annual Session Program is, as per custom, printed in this number of the JOURNAL, in full and as it will actually be rendered. There will be no changes, barring correction of incidental errors, at least not until the meeting convenes, and then only by act of the general body. In short, and as we have said before, our program constitutes a contract between the Association and its members, the details of which are as definitely fixed as the details of any contract. Barring error and the well known "acts of God," a member can choose from the published program those events which he wishes to attend, be there at the time mentioned and be served exactly as promised. That is worth a lot, and it is something that is too often missing in the conduct of medical meetings—or, as for that, meetings of almost any character.

We believe we can promise our members who attend the meeting this year, that they will be entertained and edified to an exceptional degree. Comparisons are odious, we know, but we can recall no program and no setup more pleasing than that which will be disclosed by a perusal of programs for our Fort Worth meeting.

While our program stands for itself, and is about as explicit as editorial reference thereto could be, perhaps it is wise to summarize somewhat.

First of all, the activities of the meeting revolve around the Hotel Texas as a center, with the Blackstone Hotel a slight offset. The latter hotel is just two blocks away, on the same side of the same street. Registration will be at the Texas, on the Mezzanine Floor. The Information Bureau, and all service which the Association assumes to render its members who are in attendance on the

Medical Arts Building

☆

Home of Our Host

meeting, will emanate from there, or thereabout.

And it is worth noting in this connection that there will be numerous house and outside telephone lines, and such messenger service as will be necessary to keep each member in attendance on the meeting, local or from out of the city, in touch with their respective offices, and homes, as nearly as that can possibly be done. This, of course, provided those who register leave the information at the Information desk as to where they may be found during their stay in the city, or while attending the several meetings almost constantly in progress.

The House of Delegates will meet Monday, May 12, at 10:00 a. m., in the Longhorn Room, Mezzanine Floor of the Texas Hotel. It is scheduled to meet again Wednesday night, and again Thursday morning. The Wednesday night meeting is subject to change. The other meetings are fixed.

Twelve related but not connected organizations will meet on Monday, the 12th. The programs for these meetings are published with our program. We would have our readers make special note of the value of these meetings, with the suggestion that they attend those of them in which they are interested and which they are eligible to attend.

The technical and scientific exhibits will be in place Monday morning of the meeting. These exhibits and the special meetings mentioned, would alone justify the trip to Fort Worth. The scientific exhibits will be found to be on a par with those of any annual session heretofore, which is saying quite a good deal. The technical exhibits will be found to be most attractive and interesting, also, likewise as heretofore. Incidentally, the numof technical exhibits shown has been limited somewhat by lack of space, but at that there are plenty of them. Something of almost everything of the sort in which a doctor may be expected to be interested will be found there, and many of our old friends from away back yonder will be there.

The General Meetings have received the usual careful consideration of those in charge of the program. The General Meeting on Tuesday has been split in two parts. First there will be the Opening Exercises, so called, beginning at 9:00 a. m., at which the President will deliver his annual address. The Past Presidents will be presented at this time, and as was done last year at Dallas. The Woman's Auxiliary, through its President, will extend the usual greetings.

After a brief recess, the first general scientific meeting will be held, beginning at 10:15 a. m. Three of our most distinguished guests will deliver addresses on most interesting subjects.

The General Meeting on Wednesday will begin at 3:15 p. m. and close at 5:00 p. m. This meeting will follow immediately the clinical luncheons for that day.

The General Meeting on Thursday will be held from 9:00 to 11:45 a. m. The Combined Clinical Luncheons will follow immediately, and this luncheon will in time be followed by the snappy, always attractive combined sections meeting. Through the expedient of switching these two meetings, the crowd is held through the afternoon of the last day to a fairly successful degree. Regular attendants on our annual sessions will remember the difficulty always experienced in holding an audience through the last items on the program.

The Clinical Luncheons have been emphasized this year, as heretofore. There will be four clinical luncheons on Wednesday, one each for the sections on Medicine, Surgery, Eye, Ear, Nose and Throat, and Pediatrics. These will be combined on Thursday. Our distinguished guests will be present at each of the luncheons, for the purpose of answering any questions which may be propounded by those in attendance.

The Memorial Services will be held Wednesday, from 5:15 to 6:15 p. m. This will at once be recognized as a change from last year. It is believed that it will be an advantageous change. Our members can go directly from the General Meeting to the Memorial Services, and from there, with but slight intermission, to special dinners, such as those of the fraternities. The House of Delegates meets on the evening of this day, but after these activities will have subsided, the Tarrant County Society entertainment will follow somewhat later in the evening.

The programs for the scientific sections have been very carefully made up. Our guests will be in attendance on the sections in which they are directly interested, for any service they can render in the discussions. They will present prepared papers at various times, and will discuss any paper which may seem to need discussing.

The President's Reception and Ball will, as heretofore, be held on Tuesday, beginning at 9:15 p. m. It will take place in the Crystal Ballroom of the Hotel Texas.

The Tarrant County Medical Society will entertain on Wednesday, beginning at 9:30 p. m. and lasting until 1:00 a. m. In this connection, it will be recalled that from year to year objection has been raised by the House of Delegates and other official groups, to the extravagant entertainments extended by our host societies. In spite of official requests that these entertainments be curtailed somewhat, each year the entertaining society seems to try to outdo the Joneses. No matter

how attractive these functions have been, and they certainly have been most attractive, without exception, there is always the objection that they turn out to be the most burdensome part of the responsibility of entertaining the Association at its annual session. Thus it is that occasionally we find a county society which might be expected to extend an invitation to the Association to be its guest next year, somewhat reluctant to do so. The financial burden and the trouble involved are accepted with some hesitation. It should not be that way, certainly now that the Association has grown to such a point that only a few county societies in the state can offer the setup required for a completely successful meeting.

Thus the Tarrant County Medical Society, at the insistence of responsible groups in the Association, has agreed to restrict the expense and the complications always incident to such entertainment. It will not be a letdown. Indeed, it is believed that the rank and file of the Association will greatly prefer the sort of entertainment to be extended, over almost any other sort. To begin with, there will be a cocktail party at each of the two hotels, namely, the Texas and the Blackstone. Then there will be a dance at each of these two hotels. It is expected that our members will circulate between the two hotels, thereby increasing their opportunities for meeting their friends and for such social contacts as may seem desirable. The cocktail hour is 9:30 to 10:30 p. m., and the dance from 10:00 p. m. to 1:00 a. m. This entertainment will be strictly informal. The idea is that good friends shall gather together for a good time, and the Tarrant County Medical Society insists upon it that good friends should include both old friends and new friends. It is hoped that our members will make this entertainment the success the Tarrant County Society so earnestly hopes it will be.

Headquarters for the Woman's Auxiliary will be set up at the Blackstone Hotel. The business meetings of the Auxiliary will be held there. Entertainment for the Auxiliary will be varied, as always, and as set out in the program printed with our program. Programs of the two groups have been so dovetailed that they will not interfere with each other in any particular.

While it is true that the headquarters hotel has sold out, and the other hotels have very nearly done so, it is a fact that always reservations are forfeited at the last moment, and these are made available to waiting lists set up by each hotel. Those who expect to attend the meeting should write at once to the hotel of their choice. And if they cannot get what they want in this manner, they should write to Dr. Sidney A. Price, W. T. Waggoner Building, Fort Worth, Chairman of the Committee on Hotels. Dr. Price will take great pleasure in helping any member secure exactly the sort of hotel accommodations desired. Some member of the committee will be on duty at the Bureau of Information as needed.

Finally, we would urge upon our readers that in attending the annual session they give consideration to ways and means of improving the program and the setup. There will be a page in the program set aside for the use of our members in making such suggestions. This page appears in the program each year, and the results seem to indicate that either our members are wholly indifferent, or our meetings are so satisfactory that there is little or nothing to suggest. Those in charge certainly hope our meetings are satisfactory, but they find themselves constantly making changes, hopefully for the best. If they can think of changes to make, so can others. Nothing short of the best is good enough. Our members certainly can make helpful suggestions as to invited guests for the next meeting. While it is true that the President of the Association has the exclusive authority of making selection, he is always glad to have the suggestions of his section officers, and of members of the Association.

The Legislature Continues to Grind.—How it happens is a mystery to the outsider, but apparently a good deal is being accomplished. It does not mean that a lot of legislation is enacted into law. Reasonably satisfactory progress is undoubtedly being made in that direction, but the big accomplishment of the present legislature seems to be the skill and dispatch with which it puts many mischievous measures out of their respective and collective misery. But it is not our purpose to criticize our legislature, favorably or unfavorably. We desire merely to let our readers know approximately what is legislatively happening to medicine and the public health.

Before going into detail, however, let us voice a complaint that has been made to us by numerous legislators, namely, that their doctors do not advise with them concerning medical and public health legislation to the extent that they would like to have them do. Many letters are reaching individual legislators, and most of them are helpful, but the average legislator has no way of knowing what is best along medical and public health lines in any given case except he gets the information from some reliable medical source. They know of nobody better to go to than their own doctors. As we have said many times before, most legislators want to do the

right thing, and will do it if they know to do it. Some, of course, are prejudiced in favor of bizarre ideas in the field of health, either because of friendship for individuals, misleading and specious advice, or a natural mental slant in such matters. These need to be reasoned with. Those who are foursquare in such matters need to be encouraged, and even commended. Rather generally it is our own fault if our legislature goes astray in the field of health legislation.

It will not be possible to go very much into detail, but here is about what the situation is as we go to press:

Chiropractic Legislation is dragging somewhat, although one Chiropractic bill (H. B. 189) has shown more evidence of life than any such measure in late years. The State Medical Association and the State Osteopathic Association, jointly, opposed this bill before the House Committee on State Affairs, to which committee it may be recalled it was referred when introduced. After a prolonged and rather astonishing hearing, the bill was referred to a subcommittee consisting of Representatives Fuchs of Washington, Boone of Tarrant, and McMurry of Clay. The subcommittee was supposed to make some recommendations as to what should be done about the whole situation. However, two members of the subcommittee, Representatives Fuchs and McMurry, allegedly without the knowledge of Representative Boone, made a report to a called meeting of the whole committee, and the bill was voted out on a voice vote. Upon motion of Representative McAlister of Tarrant, the bill was re-referred to the committee, and by an overwhelming vote. Perhaps attention should also be called to the fact that Senator Sulak, chairman of the health committee of the Senate, introduced in that body the same chiropractic bill, known in the House as H. B. 189. Apparently nothing is being done about that measure.

The Medical Service Plan Legislation, to which we referred in these columns last month, after considerable maneuvering, has been reported favorably in the Senate. The hearing in the House has been interfered with by complications over which no one has been able to exert any control. The only opposition to this measure which appeared in the Senate hearing, was by the osteopaths. They were represented by certain of their officials and attorneys. Their desire was to amend the bill so as to require, most importantly, we are sure, that any plan set in motion in the state under the Enabling Act under consideration, be available to all legalized practitioners, regardless of school or what have you. There were other points raised, mainly as a smoke screen, it seemed to our committee, but the main idea was to force the acceptance of osteopaths in the operation of the plan. Our legislative committee readily agreed to eliminate from the bill any reference to "Doctors of Medicine," so that any legalized practitioner of medicine would be acceptable under the law, provided he was also acceptable to the medical profession locally, under the democratic rule that the majority shall prevail. There is nothing in the bill which can be used to shut an osteopath out, or require that he be let in. And the same thing with any other school of practice.

If this measure could secure a place on the calendar of uncontested bills, it would undoubtedly pass. It will likely not pass otherwise. If it does not pass, the public will have the osteopaths to thank. The legislature is anxious to do what is right in the matter, but such opposition as has been presented by the osteopaths is confusing and disconcerting.

It is too bad, too, because under the enabling act sought in this bill, any county medical society in the state could organize itself into a loose partnership, under the protection of corporation law, and set up a service on a monthly pay basis which would enable the people of the lower financial income brackets to secure medical service of their choice. And, strangely enough, doctors so serving would be able to collect perhaps full minimum fees for service rendered a group which is rather generally not able to pay very much for medical attention. The experience of the Dallas County Society Plan is such as to warrant this statement. While it is true that the Dallas County Plan at the present serves only an employed group, it seems rather clear that the plan can be adapted to service for groups organized for the purpose of procuring medical service alone. No insurance is involved. There is no guaranty of service. The only thing guaranteed is that any subscriber to the plan can secure the services of any physician participating in the plan, at any time, with no concern as to what is being charged for the service. That is a matter of interest only to the doctors who are participating in the plan. They simply divide among themselves the money collected each month, in accordance with service rendered. So far, the Dallas County Society Plan has paid off 100 per cent, and both doctor and patient appear to be fully satisfied. The same thing could be done in each county in the state.

Liquor Legislation has made progress. Our Legislative Committee has had little to do with it. Our position has been stated in unequivocable terms. We consider ourselves outside looking in. The measure which has made the greatest headway, and which, it appears, will pass, is rather a wild sort of thing, and while it is doubtful whether it will curb the use of alcohol as a beverage, in prohibition counties, undoubtedly it will greatly curtail the amount of whiskey sold on prescription, whether or not such liquor be called a beverage. We have advised the legislature that it will be all right by us even if it prohibits the prescribing of intoxicating liquor at all, and that in any instance we are willing to have the right to prescribe liquor curtailed to the extent necessary to stop what is undoubtedly a reprehensible practice. If the measure in question becomes a law, doctors will simply revert to the provision of prohibition days that a doctor may prescribe not more than one hundred pints of liquor in ninety days.

Narcotics.—As we go to press, the word comes that Senate Bill 70, amending our state narcotic law, as agreed upon by a conference committee between the Senate and the House, is in the hands of a Joint Conference Committee. The bill had, as a matter of fact, been amended to the point where it would not add any red tape or bother to the practicing physician, except, indeed, it be considered an imposition to require that paregoric be sold only upon prescription. Apparently what hurts the bill was the opposition from the farmer, who does not want to be compelled to go to a doctor when he wants to get a little paregoric for his medicine cabinet. This criticism may be fatal to the measure.

Premarital Examination.—The measure requiring premarital medical examination (H. B. 79, by McMurry, *et al,* has been amended somewhat and is now pending in the house. As stated before, our legislative committee has rather kept hands off in this particular legislation. The bill is recognized as being not only impracticable but highly objectionable from a number of angles. Quite evidently, the House, which has heretofore favored this legislation, is becoming suspicious. The bill may not pass there, and likely will not pass the Senate.

Cancer.—Representative Cato of Parker county introduced a bill (H. B. 268), setting up a cancer hospital, and providing for cancer service for the indigent. The Committee on Cancer of the State Medical Association had prepared a measure carrying more or less the same provisions. Neither measure fully met the views of the Executive Council of the Association, which gave the matter much thought and no little discussion at its midwinter meeting. It was the view of the Executive Council that any effort to secure cancer service for our people should be merged with the efforts of the Regents of the University of Texas to greatly extend the Medical Branch of the University, located at Galveston. There had been set up in the budget for that institution a tidy sum for the establishment at Galveston of a cancer clinic. It was rather generally the opinion of those who discussed the matter at the meeting mentioned, that it was entirely feasible to set up a real cancer hospital under the direction of the Board of Regents of the University, with extension of service to the larger centers of population in the state, and sufficiently well distributed to make the service available to sufferers from cancer throughout the state.

In the light of this opinion, Mr. Cato, our Committee on Cancer, and our Legislative Committee, with representatives of the University, worked out what appears to be a very practicable and promising measure, and Mr. Cato has had it substituted for his bill. The Committee on Appropriation of the House, which had already heard the cause of the University, gave close attention to the plea of the groups interested in the Cato Bill, and referred the latter to the subcommittee which was handling the former. That is a very promising maneuver. It is quite likely that for the first time a fairly satisfactory appropriation will be made to set up a cancer service for the indigent population of Texas, and for the promotion of cancer research and the education of medical students in the diagnosis and treatment of cancer in all of its stages.

Optometry Legislation has apparently been attempted by two groups of optometrists, through several bills, not necessary to describe here, we are sure. One of these bills, H. B. 166, appears to have the backing of the Texas Optometric Association. It merely attempts to raise the professional standards under the present law. Four of the bills, H. B. Nos. 91, 92, 93 and 99, appear to be something else entirely. Their purpose seems to be very largely to confine the practice of refraction to licensees of the State Board of Examiners in Optometry. None of the last mentioned bills will likely pass. They are still in the hands of the Committee on Public Health.

The Hospital people undertook to amend the group hospital service law so as to permit an increase in overhead, a very needed amendment. The osteopaths sought to secure the amendment of this bill (H. B. 122) so as to require tax-free hospitals participating in the plan, to accept the patients of all legalized practitioners of medicine. As we go to press, we learn that the House Committee on Public Health has refused to accept any such amendments. They will be offered from the floor of the House if and when the bill is considered there.

There are numerous other measures of a medical nature. If they subsequently assume proportions, they will be called to the attention of our readers.

The Doctor and the Draft.—Much has been said and written about the problem of medical service for our armed forces, both in training and in any war emergency which may arise. It is not our purpose to discuss the matter at length. We are moved to make some observations in this connection because of the information which has come to us that doctors have actually been drafted and inducted into the service as enlisted men. We have not verified the rumors. We imagine there is something wrong somewhere. The government has no present intention of taking an expensively educated doctor and putting him to work doing things that a less expensively educated individual can do as well. It is appreciated that it is not only a matter of cost in money, but cost in time, which must be considered. The need of medical officers for our armed forces is even now causing grave concern at Washington.

Another rumor which is more or less disconcerting, is that the Army has suspended the issue of Medical Reserve Corps commissions. The State Selective Service Headquarters at Austin, advises that no such thing has happened. Any doctor who is eligible and who desires to serve as a medical officer of the Army, should make application at once for commission. He may not be commissioned, but the proper authorities would like to know that he is available.

Certainly any doctor of draft age who is selected for service, should make application for commission in the Reserve, either at once or at the time he is called. That is the only way he can avoid being drafted, as a matter of fact.

A Questionnaire on the Availability of Physicians for Military Service and Civil Practice is being promulgated by the American Medical Association Committee on Medical Preparedness. Unlike the recent questionnaire on availability for such service, which went to the individual physician, this questionnaire seeks to determine, through county medical societies and state medical associations, just *who* is available for *what* sort of military service, and *who* is available for *what* sort of civil practice. It will be remembered that in the questionnaire directed to individual physicians, it was sought to determine who would like to serve in a military capacity, and just what service they would like to render, and who would prefer to serve the civil population, or the public health, or the expanding industries of the country, and in what capacity. That information is now on file at Chicago. It constitutes an invaluable reservoir from which to draw physicians for any sort of medical service in any sort of emergency. Thus we are in a position to correct many of the deficiencies in medical service so prevalent during the first World War. Even so, there is something lacking, and the questionnaire to which we

now have reference presumably will furnish that.

The government now wants to know the names of the legally qualified doctors of each county in the United States, regardless of race or age, who for a variety of reasons should remain at home and in civil practice, that they may not be called to military service. The government does not want to upset medical colleges, in their efforts to keep the supply of doctors flowing; neither does it want to upset hospitals, which must continue to serve the public and which must be so staffed that they can do so; industrial concerns engaged in production of war material, and the health service of the country. County medical society committees on military affairs will be asked to prepare the necessary lists.

If there is any county medical society which does not have an active Committee on Military Affairs, it should appoint one at once. If there are any doctors in the state who should do so and who have not accomplished the original questionnaire, they should attend to that matter at once. All should join in what is hoped will be the last effort at gathering such statistics and information, and see that each is properly listed with his county society, and the information promptly furnished the State Committee on Military Affairs.

Cancer Control Month.—Texas joins the American Society for the Control of Cancer in publicizing the need of cancer control. The month of April has been selected for concentration of efforts in this direction.

Texas is the largest State in the Union. Its people are independent and resourceful. They have a habit of meeting challenges with a frankness and courage which is refreshing and effective. Today they are taking rapid strides in meeting one of the greatest public health challenges, namely, the control of cancer.

There was recently held at Dallas one of the eight Regional Assemblies of the Women's Field Army of the American Society for the Control of Cancer. Mrs. Volney W. Taylor, of Brownsville, is the State Commander of the Texas Division of the Women's Field Army, and Dr. J. M. Martin, of Dallas, is the Chairman of its Executive Committee.

This movement in cancer control is unique among public health activities, in that the executive bodies in every State are predominantly medical, and work in close contact with the State and County Medical Societies and the Cancer Committees of these organizations. Texas is no exception to the rule. The profession has rapidly and energetically adopted a favorable and coöperative attitude toward the work of the American Society for the Control of Cancer, and has received from that Society aid and support in the form of material for exhibits and educational literature for distribution.

As the program in cancer control develops it becomes increasingly clear that individual responsibility and activity, both by the members of the profession and by the intelligent laity, is an absolute essential for success. The American Society for the Control of Cancer is conducting its program with very inadequate financial resources. It calls for the continued interest and whole-hearted support of all members of the profession. This the State of Texas has given in the past and will, we feel sure, continue to give in increased measure in the future.

Our Cancer Committee, acting in conjunction with our Committee on Legislation, is supporting a measure now pending in our state legislature, providing for the establishment of a state cancer hospital, with extension of service to various population centers of the State. The bill was introduced by Representative Arthur Cato of Weatherford. It is known as H. B. 268. It provides not only for diagnosis and treatment, but research as well. The cancer service contemplated has been joined with the expansion program of the Medical Branch of the University of Texas. Thus not alone will a much needed service be rendered a people who may not have it otherwise, but an important part of the medical profession of the future will have opportunities for study and practice in both diagnosis and treatment. This latter advantage will alone doubtless save life and suffering in the very near future. Whether the Legislature will find it possible to make the appropriations required, remains to be determined. It appears now quite likely that at least a good start will be made. It is a much needed service.

Official Call American Medical Association Meeting, which will be held in Cleveland, Ohio, June 2 to 6, 1941, has been received by the State Secretary. The House of Delegates will convene Monday, June 2. The Scientific Assembly will open on the evening of June 3. The various sections of the Scientific Assembly will begin their meetings Wednesday, June 4, at 9:00 a. m.

According to the reallotment of delegates made at the last annual session, Texas will be entitled to five delegates for the following three years, instead of six, as heretofore.

It is hardly necessary, we are sure, to say much in these columns about the annual sessions of the American Medical Association. Our readers are certainly well advised. There is no more attractive medical meeting held

in the world, anywhere, and our doctors are in the habit of traveling long distances and "going fur places" in attending medical meetings and postgraduate courses. Our Committee on Transportation will recommend to the House of Delegates that the Missouri-Pacific Lines to St. Louis and the New York Central out of St. Louis, as the official route to this meeting.

Those who have not made hotel reservations for the meeting, and who expect to attend the same, should write either to the hotel of choice, or to Dr. Edward F. Kieger, Chairman of the Committee on Hotels, 1604 Terminal Tower, Cleveland, Ohio, and do it without delay. While there will doubtless be ample hotel accommodations, the fact will still remain that exactly what is wanted, where and when wanted, will not always be immediately available.

Volume XXXVI is completed with this number. We are varying the style customarily followed in a statistical comparison with the immediately preceding volume, substituting therefor a brief explanatory discussion. The present volume is slightly smaller than usual, the decrease in size being due principally to shorter articles in the original article section, and to a decrease in the reports of activities of county medical societies.

The first change is a desirable one, in that long articles are a detraction rather than attraction in a State Medical Association journal. There are publications devoted to the specialties in medicine, in which extended articles on research, or complete discussions of subjects are proper and useful. Such articles would not be read by the great majority of readers of a state association journal, which naturally is planned and edited for the desires and appetites of the greatest number of its readers.

The lesser and briefer reports of meetings of county medical societies in the present volume is to be deplored. This particular department of the JOURNAL could easily be its most interesting section, if county societies would prevail upon their secretaries, or some other members selected for the purpose, to send in for publication full and complete accounts of meetings.

There was a slight increase in the number of advertising pages, which, coupled with the decrease in reading pages, should mean that the present volume will not end the year financially in the red. While there is no desire to make a profit on the JOURNAL, with the anticipated loss of revenue from member subscribers in the year or perhaps years to come, depending upon the unpredictable world war situation, the policy of hewing as closely as possible to the budget as a whole is most desirable.

In this connection, our advertising income could be materially increased if our readers would make it a point to patronize advertisers in *their* journal, other factors being equal. The greater number of advertising pages thus secured would make possible a larger and more attractive reading section.

The importance of binding copies of the JOURNAL to preserve them is again stressed with the concluding number of the volume. Bound copies may be secured from the JOURNAL office for the exact cost of the binding, $3.00, as long as reserve files will permit. After these files are exhausted, or depleted to the extent permissible, it will be necessary for members or subscribers to furnish copies for binding. The binding used is red Morocco with gilt lettering, both attractive and durable.

Finally, this opportunity is taken to express for the JOURNAL staff, appreciation of the courtesies uniformly extended them, of the many expressions of encouragement, and of the forbearance manifested in the errors apparently unavoidable in publication. We may look forward with assurance to improvement in future volumes.

DON'T TELL THE WORLD

The other day the secretary of a western Michigan county medical society made the statement that the first time that one of his members asked why laws unfavorable to the medical profession were enacted by the legislature, "all hell will break loose." He continued his statement by detailing how he had pled with his members to interview their local representatives to the state government and in spite of promises, not a single one had even broached the pertinent subject to the legislators.

Of course, this situation is so sommon that the secretary was not even commiserated.

You, and every other member of the Michigan State Medical Society, are informed by the secretary of your county society of all bills bearing on medical subjects introduced in the two houses. Usually every week or two your representative will visit your district over the week end or longer and will not only listen to, but be considerably influenced by, your opinion as to the value of these bills.

Don't tell it to the world. Don't grumble in the doctor's room. Tell it to your legislator.—*J. Michigan M. Soc.*

EDUCATIONAL NEEDS OF CHILDREN

Children differ not only in the speed with which they can learn the material presented in school classes but also in the type of material which meets their needs, Frank L. Beals, Chicago, points out in the March issue of *Hygeia, The Health Magazine.*

"Children who are highly endowed do not do the same things more rapidly than children of average intelligence; they do them differently," he says. "Higher intelligence requires an enlarged scope for creativeness; lower intelligence requires an enlarged scope for habit formation."

A CONSIDERATION OF SOME COMMON PEDIATRIC PROBLEMS*

ALAN BROWN, M. D., F. R. C. P. (Lond.)
TORONTO, CANADA

In planning this paper, I have selected for discussion the subjects which have, in my experience in both private and hospital practice, exhibited problems in management to pediatricians and general practitioners.

HEMORRHAGIC DISEASE OF THE NEWBORN

Hemorrhagic disease of the newborn is a spontaneous bleeding which occurs in the newborn period. The age at which it occurs most commonly is the second to fourth day, but it may occur at any time up to the twelfth day. The sites of hemorrhage are gastro-intestinal, umbilical, nasal, oral, circumcision, intracranial and visceral, in fact any place in the body. The treatment has been the transfusion of blood from a suitable donor to the baby. By such treatment in most cases bleeding was arrested. At the Hospital for Sick Children during the past five years in approximately 20 per cent, a second transfusion was necessary. If a vital centre had not been affected the patient made an uneventful recovery.

It has been known for some time that the prothrombin content of the blood in cases of hemorrhage of the newborn was very low. With recent methods for the more rapid estimation of this it has been shown that the prothrombin content of all newborn babies' blood is lowered and is markedly decreased in hemorrhagica neonatorum. Certain authors have found that the prothrombin content falls from birth for two to four days, then rises to normal by ten days. This may justify the Mosaic law of circumcision on the twelfth day.

Recently vitamin K has been isolated, and it has been shown that this vitamin is necessary for the formation of prothrombin. Lack of this vitamin in the mother's diet may be a factor in the production of bleeding tendencies in the newborn period. We have administered vitamin K to pregnant women toward the end of the period of gestation and it seems to increase the prothrombin content of the cord blood. Also we have treated cases of hemorrhagic disease of the newborn with synthetic vitamin K given intravenously with success. The bleeding has stopped and the prothrombin content has rapidly returned to normal.

In all probability this disease will fall into the group of preventable diseases—by the use of proper diet and supervision it will be entirely eliminated. Certainly with better dietary supervision of the pregnant woman during the last few years the number of cases and their severity have definitely decreased. No doubt this has been due to the unplanned incorporation in the diet of the mother of natural sources of vitamin K.

NUTRITIONAL DISORDERS

1. *Hunger and Colic.*—One of the most frequent diagnostic mistakes regarding the nutrition of the infant is the error of confounding colic with hunger in the newborn. Newborn infants suffer nowadays not from overfeeding with breast milk, but from a lack of it. For every case of overfeeding we probably see ninety-nine cases of so-called hunger colic. Practically all young mothers, overtaxing their strength in their eagerness to be up and about after their long confinement, harried by old wives' tales and conflicting advice of well-meaning neighbours, secretly afraid of her new baby, and frightened that he is going to die at every squirm and grunt and yawn, run short of milk toward the end of the day.

"Milk production is milk production, whether in womankind or the lower animals. A Jersey cow if frightened or teased about her calf will give perhaps a quart of milk at the next milking time instead of the expected three gallons. Even a hog or a dog that drives her from the pasture, or a strange milker will affect the quantity of her milk. A woman is much more susceptible to nervous reactions. Milk production in all our minds is associated with green meadows, still nature and kind faced old cows standing in quiet streams (not listening to a baseball game or a prize-fight over the radio)."[4]

"A modern, educated woman is not a kind faced, stolid milk machine, and so she always at some time or other runs short of milk. And then the baby cries, and when the baby cries his stomach hurts him. Have you ever thought how the whole world is obsessed with the idea that every time a baby cries his stomach hurts him? The pediatrist has added ears to the list of places a baby can hurt, but when the ears are examined and found normal, then he too usually says the baby's stomach hurts him. So night after night when the tired worried mother runs short of milk, the baby cries. He cries, he screams, he gets red in the face and doubles up; he kicks and straightens out, and rears back in a perfect paroxysm of 'rage'; he gnaws at his fist and his mother's face; he tries with every way he knows to show he is hungry, but still he has the stomach ache. Finally, when he is comfortably full of hot water or medicaments he goes to sleep, and he awakens the next morning as if nothing had happened. But the next afternoon, late, when the tired family wants to go to bed he 'pulls another party'. He is a smart looking baby; he holds his head up well and his back seems strong. He is preternaturally bright and the neighbors all say they never saw such an intelligent looking little baby. He is a light sleeper and the whole family has to be quiet to keep from waking him. Occasionally a young father, untrammelled by old womens' tales will have a lucid idea and say 'If that were a puppy I'd say he was hungry and feed it'. And there is no better appeal to their understanding than the illustration of the hungry puppy. The signs of hunger in other animals are usually recognized, because they are not hedged about with a mass of superstí-

*Address delivered before a General Meeting of the State Medical Association of Texas, Dallas, May 15, 1940.

tion and empirical nonsense. The hungry puppy is wakeful. He wakes with the slightest scrape of the foot on the floor. He gets up every few minutes and hunts for a softer place to lie. He is the smart dog who handles himself well, and in begging for food is all a-wiggle as if his muscles were of rubber. He is preternaturally smart and bright. Usually he is the runt who is crowded away from the breast by the stronger puppies, and because he appears smarter he is considered the pick of the litter. The full puppy is lazy and stupid and relaxed."[4]

"The full baby is a stupid little animal. One who is easily waked, who is especially smart and intelligent looking, one who handles himself too well for his age, he is a hungry baby. You can walk in the nursery, take one look at such a baby and absolutely diagnose the cause for your visit just the same as you can stand at the foot of the bed and see a rapid respiration with flushed face and an expiratory grunt, and know the baby has pneumonia."[4]

There is no difference of opinion as to the therapy in hunger colic.

2. *Tetany of the Newborn.*—Tetany is a condition of hyperirritability of the neuromuscular systems as a result of lowered blood calcium. If the blood calcium is sufficiently below the normal level the individual has convulsions and spasms which may result in death.

The typical case of tetany in an infant between four and ten months has a history of lack of vitamin D in the diet. The infant develops convulsions and in some cases an inspiratory crow. The season of the year is usually late winter, spring, or early summer. On physical examination one finds carpopedal spasm, Chvostek's and Trousseau's signs and evidences of rickets. The blood calcium level is below 8 mg. per 100 cc. of serum.

Since 1934 in the Hospital for Sick Children there have been twenty-one cases of tetany of the newborn. The first case that was recognized gave a history of cyanotic attacks, breath-holding spasms from birth, with twitching of the body starting at two days of age. This patient was treated for thymus disturbance. During the fifth day, an inspiratory crow was heard and the blood calcium estimated. It was found to be 7.2 mg. per 100 cc. of serum. Since that time every infant in the neonatal period showing spells of cyanosis, twitching, convulsions and signs suggesting hyperirritability of the nervous system, has had a blood serum calcium estimation made. By doing this many cases of tetany in the newborn period have been diagnosed. It was observed that the classic signs of tetany usually are absent, *e. g.*, laryngismus stridulus, carpopedal spasm, Trousseau's and Chvostek's signs. To sum up, the symptoms and signs suggestive of tetany in the newborn are attacks of cyanosis, twitchings and convulsions. The diagnosis is made by an estimation of the blood serum calcium.

Treatment used is the injection of 10 cc. of a 10 per cent solution of calcium gluconate intravenously or intramuscularly followed by the daily oral administration of 50 grains of calcium chloride for two days and 30 grains for three weeks. This is supplemented with a cod liver oil concentrate such as Viosterol or percomorph liver oil, 30 minims daily.

In some of the cases followed by us it has been observed that the intramuscular injection of calcium gluconate results in a hard, calcified or stony mass in the thigh muscles. Usually this disappears in time. However, recently one patient developed a sterile abscess and a large slough over the area so that we feel that intravenous injection is the better route.

3. *Hypertonia and Pyloric Stenosis.*—In spite of the vast amount that has been written on pyloric stenosis, there still exists failure to differentiate it from hypertonia (vagotonia). In pyloric stenosis the cardinal symptoms are forcible vomiting, loss in weight, diminution in fecal and urinary output, while on examination the typical waves may be seen, and on palpation the tumor felt. In contrast to this, in the hypertonic infant one obtains a history of incessant crying (unrelieved by dietary change), often forcible vomiting and either diarrhea or constipation, and often indeed the mother will volunteer the information that the infant appears to be very strong for his age, and on examination it is noted that the baby's muscles are in a constant state of contraction and relaxation, that he will almost stand alone, and that he can be lifted by the elbows without giving way at the shoulders. These facts, together with a continual hyperextension of the head, confirm the fact that he belongs to the vagotonic group. Confirmation of this may be obtained by applying the therapeutic test, by giving one dose of 1/1000 grain atropine sulphate. If the infant belongs to this group he will exhibit at least partial, if not entire, disappearance of the symptoms. Occasionally larger doses may be necessary, but one or two doses are sufficient for diagnosis, and then the therapy should be continued until the infant reacts normally. All so-called and incorrectly called instances of pylorospasm fall into this group.

In making a diagnosis of hypertonia, one should always bear in mind the possibility of the child suffering from a cerebral agenesis or an old cerebral birth injury. In both of these cases the infants usually exhibit varying degrees of hypertonicity and for this reason a very careful history should be taken. It is my experience that if the baby does not respond satisfactorily to adequate doses of atropine, one should be extremely suspicious

of either one of these central nervous system lesions.

4. *Allergic Gastro-intestinal Disturbance.*—When either a newborn or older infant receives its first dose of cow's milk, a series of severe symptoms, such as vomiting, diarrhea and prostration may occur immediately after, or some hours following, the first dose of milk. Protein skin tests, in instances of this type, are invariably negative, yet these infants may be frequently fed on the so-called "canned directions" and buffeted around from pillar to post without a full appreciation of the etiological factor concerned. It has been successfully demonstrated that it is possible to actively sensitize a guinea-pig fetus in utero, and with this evidence in hand it has been shown that there is a casual relationship in the human subject between the ante partum diet and the sensitization of a human fetus in utero. The newborn infant invariably receives a few ounces of cow's milk dilution during the first week while the breast milk is being established. This procedure introduces the foreign protein to which the infant later becomes sensitized and to which he may react many weeks or months later when a further addition of cow's milk is made.

RESPIRATORY INFECTION

Colds.—Colds or mild respiratory infections and their complications are the most common infections that the physician is called upon to treat. In spite of their prevalence little is known regarding specific therapy. The general consensus of opinion is that it is a virus disease spread through contact with infected individuals, and that it is not simply a case of "open the window and influenza." The only draughts in this world that are of value are bank drafts, and they are all too few at the present time. Drafts don't cause colds any more than cold feet or wet clothes, and physicians dealing with small infants, especially premature ones, should realize this because it is the complication of head colds that carries off premature and weakly infants with bronchopneumonia. Colds are best treated by prevention, as is well illustrated by the old New England epitaph:

> "Here lies our wife, Samantha Proctor;
> She ketched a cold and wouldn't doctor;
> She could not stay; she had to go.
> Praise God from whom all blessings flow."

This makes Samantha out a stubborn ignoramus, which is manifestly unjust. No doctor could cure a cold then, and no doctor can cure a cold now. Until the scientists find out a great deal more about colds, the cynical old medical joke will hold good: "An untreated cold lasts fourteen days, while a treated cold can be cured in a fortnight." These somewhat jocular remarks are spoken in all earnestness to emphasize our helplessness in treatment, and to indicate the importance of prevention of contact of weakling infants with infected individuals. Lastly, all children of the runabout age and older should be kept in bed, not only till the temperature is normal, but till the patient is symptom free, in order to more readily prevent the more serious complications; fortunately, however, in the past three years chemotherapy has brought about more satisfactory results even in the smallest of infants.

GENITO-URINARY CONDITIONS

Pyuria.—Pyuria as found in children means usually a suppurative interstitial nephritis. There are three main types: (1) newborn type, (2) diaper or ascending type, (3) type secondary or resulting from an abnormality in the urinary tract.

The first type or newborn type is found in both sexes with slight preponderance of males. The infection may be blood borne but is more likely to be by direct spread from the umbilicus via the urachus to the bladder. The symptoms are fever, failure to thrive and feeding difficulties. If the patient is all right otherwise, this type recovers usually with pushing of fluids, proper feeding and general supportive measures. Specific medication is not necessarily indicated. The pyuria may be very temporary or extend even to weeks' duration.

The diaper period type or ascending type is seen most frequently in infants from 2 months to 2½ years of age and occurs almost 100 per cent in female babies. This group is not limited to the diaper period and is often seen in older girls. The infection often gains entry by improper cleansing after defecation and in many cases it is found that excreta around the anus is carried forward to the vulva. This is an acute type of pyuria. In this type there is fever and with this in 60 per cent of the cases there are symptoms pointing to involvement of the urinary tract as frequency, scalding, abdominal pain, costo-vertebral tenderness, and so forth.

In the other 40 per cent there is fever and with this there are symptoms of a gastro-intestinal upset, upper respiratory tract infection or convulsions and it is only with a routine urinalysis that the true diagnosis is made. Urinalysis reveals albumin, bacteria, and pus cells both singly and in clumps. As a rule the fever drops in from three to ten days but the pyuria may persist for three weeks. If the pus in the urine remains longer than six weeks or if there is recurrence of fever and pus in the urine, then in all probability we are dealing with a persistent

pyuria, associated with an anomaly of the urinary tract.

The treatment of this type of pyuria is to first combat the acidosis and fluid lack. This is accomplished by fluid diet and if necessary parenteral fluid. Alkalies such as citrates are of value in combating the acidosis and producing diuresis. Sulfanilamide given in doses of 15 grains per 20 pounds body weight is probably the most effective method in the treatment of this type of pyuria. Treatment should be carried out until one obtains two successive negative cultures on the urine.

The secondary type of pyuria results from some abnormality of the genito-urinary tract such as congenital anomaly, tuberculosis, stone, or new growth. It occurs equally in both sexes. It is suspected when pyuria persists beyond four weeks following an acute attack or the finding of pus in the urine on routine urinalysis of cases admitted for some other condition. In 50 per cent of the cases a diagnosis was made on the history of the case before a urinalysis was done. In these there were complaints over a period of time which were mostly referable to the urinary tract, such as day and night frequency, dribbling, abdominal pain, urgency and cloudy urine. A history of fever was not always obtainable. A diagnosis of a preceding acute pyuria was made in 35 per cent of cases. In the smaller percentage of cases not recognized as persistent pyuria on admission, various diagnoses were made, such as malnutrition, nasopharyngitis, meningitis, adenitis, cystitis, renal calculus and digestive upsets. As a rule, very little information could be obtained on physical examination except abdominal or costovertebral tenderness. A palpable mass in the bladder or kidney region was not always found. In a series of 85 cases of persistent pyuria diagnosed in this hospital during a period of seven years, persistent pus in the urine has been attributed to the presence of an anomaly of the urinary tract, calculi and renal tuberculosis. In our experience, a pyuria due only to an acute suppurative interstitial nephritis with no anomaly of the urinary tract, disappears in two to four weeks. If the pyuria persists for over a period of six weeks, a complete urological examination is indicated.

To determine the causative factor for the chronicity, pyelography is essential. In our hospital, intravenous pyelograms are done routinely on all patients with pyuria. Intravenous pyelography consists of administering intravenously Diodrast or Uroselectan. The preparation of the patient is most important to eliminate the gas in the bowel. This is done by enemata, pitressin and rectal tube. Severe reactions are very rare though immediate minor ones are common. These consist of dryness of the mouth, vomiting, especially in infants, flushing of the face, urticaria and pain at the site of injection. In our experience we have found better visualization in using larger doses of the Diodrast. In all infants and children, 20 cc. or the adult dose of the substance is administered.

In older children, visualization of the urinary tract is fairly good but in infants under one year of age, the results have not been as good, partly due to the low concentrating power of the infantile kidney and to a greater proportion of infants having intestinal gas which frequently obscures the urinary shadow. Cystograms are indicated if an anomaly is present. These consist of catheterizing the bladder and injecting a solution of 12.5 per cent sodium iodide until the child feels like voiding. Anteroposterior and lateral roentgenograms are made of the bladder. A cystogram is useful in the differential diagnosis between neuromuscular dysfunction in which there is a large bladder and reflux up the ureter and of posterior urethral valves in which cases there are large bladder, no reflux but dilatation of the posterior urethra. When an anomaly is found, a cystoscopic examination with retrograde pyelograms is made.

Anomalies of the urinary tract have been found in children from birth on. In all of these the hydronephrosis found was due to the presence of an obstruction or a neuromuscular dysfunction of the bladder and ureter. Obstructions such as stenosis at the pelvoureteral junction or ureterovesical orifice, aberrant arteries, split ureters, congenital fibrous bands, calculi, congenital valves of the urethra and hypospadias have been found.

Treatment. Prior to the introduction of the ketogenic diet and the more recent use of mandelic acid and sulfanilamide, surgical treatment was the only means of alleviating the infection in the kidney. The principle of the surgical treatment is to relieve the obstruction which will allow free drainage and reduce the pressure atrophy of the kidney. This results in some restoration of kidney tissue if no further obstruction occurs. By this method of treatment the results are good as judged by the general health of the child, the disappearance or diminution of the amount of pus in the urine and absence of complaints associated with urinary tract disease. In the majority of these patients who have been re-investigated from one to six years after their treatment, there was a disappearance of the hydronephrosis, a reduction in its size, or delay in further destruction of the kidney tissue as indicated by the hydronephrotic sac remaining the same. Though the urines in these cases may be-

come pus free, the bacilluria does not disappear and even in cases where the hydronephrosis has nearly disappeared or has been greatly reduced in size, examination of the urine will often show a few pus cells, and micro-organisms are present on culture.

Thus it is apparent that surgical treatment of persistent pyuria results in relief of the anatomical irregularity, but with the establishment of free drainage the focus of infection does not clear up. This requires a bactericidal agent.

At present the drugs used are sulfanilamide, sodium or ammonium mandelate and calcium mandelate. The dosage of ammonium and sodium mandelate is as follows, for both acute and persistent pyuria:

6 years and up—ammon. or sod. mandelate, gr. 40, t.i.d.
2-6 years—ammon. or sod. mandelate, gr. 30 t.i.d.
1-2 years—ammon. or sod. mandelate, gr. 15 to 20, t.i.d.
Under 1 year—ammon. or sod. mandelate, 10 to 15 t.i.d.
"Mandical" (B & W preparation of calcium mandelate) dose—1 to 1.5 drachms t.i.d.

If the required acidity of under *pH* 5.8 is not obtained, then ammonium chloride, 60 grains daily, is given in addition. The results have been fairly good. In 85 per cent of the cases treated, sterile urines were obtained in from two to thirty-four days, the majority requiring from four to seven days. In 65 per cent of the cases, the urine remained sterile for a period of from two months to sixteen months. At present sulfanilamide is being administered to children 6 years and up, 40 grains a day with the same amount of sodium bicarbonate.

2-6 years, gr. 30, with same amount sodium bicarbonate.
1-2 years, gr. 20, with same amount sodium bicarbonate.
Under 1 year, gr. 10-15, with same amount sodium bicarbonate.

In acute pyuria the results have been good, the urine becoming sterile in a short time, but in persistent pyuria associated with an anomaly of the urinary tract the results have varied. Usually the urine becomes sterile but in about 5 per cent of the cases there is a recurrence of the bacilluria or pyuria within a short period of time.

During the past eight years there have been admitted into the hospital ten cases with a history of a persistent pyuria of from four to twelve years duration. On examination of these children there was found a high blood pressure, arteriosclerotic vessels, and eye-ground changes consisting of albuminuric retinitis; albumin from 2 plus to 3 plus was constantly present in the urine, with a few pus cells and casts. One patient had intermittent hematuria. Headaches were common; there was no edema. Determinations made on the blood for nonprotein nitrogen and creatinine gave high values. In all of these cases an obstruction was present in the urinary tract, which had resulted in bilateral destruction and infection of the kidney. Three of these children have died of uremia; five of the remaining seven have been treated both surgically and medically with very little change in blood chemistry findings, though the blood pressure has been decreased somewhat. The above cases show the end results of chronic interstitial suppurative nephritis which may occur in an obstruction of the urinary tract. To prevent such a condition it is essential to relieve the obstruction to guard against further pressure atrophy of the kidney substance, and it is necessary to administer a urinary antiseptic to cure the infection.

Fatigue.—One of the most prevalent conditions that is frequently overlooked and not fully appreciated is that of fatigue in the child of pre-school and school age. "Why is one child tireless, with resources of strength that nothing seems to exhaust, while another is unable to stand any strain without showing in one way or another unmistakable signs of fatigue? With certain children any excitement, pleasurable or painful may show its after effects in irritability, lassitude or disturbed sleep or even failure to concentrate on lessons."

Children of this type usually come from highly strung and sensitive families, gifted with much nervous energy. In the family history we usually find a history of headache, migraine, asthma, eczema and other disorders of metabolism which are apt to become evident at times of strain or stress. A clever child with good mental powers often has this undue liability to fatigue, while a slower child mentally may be comparatively tireless. His signs of fatigue (physical) may be pallor, twitching, sleeplessness and irritability, while in many instances from the mental standpoint he exhibits his fatigue by lack of concentration and confusion of thought. In many children of this type we often encounter metabolic disturbances such as headache, bilious attacks or cyclic vomiting, recurring abdominal pains, fainting and cardiac disturbances.

"We do not know precisely the nature and causes of fatigue, but biochemical studies have at least given us some insight into the character of the processes at work. The source of all energy, whether it is expended upon physical exertion or devoted to intellectual work or consumed in emotional outburst, is derived directly from carbohydrate. The carbohydrate resources of the body are comprised of the circulatory content of sugar in the blood, which by a whole series of elaborate mechanisms is always preserved at a level which varies only within

prescribed limits, and a somewhat meager reserve or store, distributed in the form of glycogen, equally between the liver and the muscles. The carbohydrate is the fuel of choice on which the body normally runs itself. When, however, the carbohydrate has been lowered to a certain point, beyond which in health it is not allowed to fall, the second or reserve supply of fuel is brought into play. This is stored not as carbohydrate, but as fat, mainly in the subcutaneous fatty depots of the body.

"Before the reserve of energy stored as fat can be utilized, it would appear that it must first be transformed again into carbohydrate. The synthesis, in other words, is reversible. Excess of carbohydrate in the diet is stored as body fat, but when this store is drawn upon, it must be converted again into sugar. In certain persons and especially in young children this conversion of fat into sugar is only achieved with difficulty. In that common disorder, which is somewhat loosely called acidosis, when the store of carbohydrate runs low and the body is thrown back upon its reserves of fat, we find that a very great deal of body fat is wastefully consumed in the production of but small quantities of sugar. Some carbohydrate is obtained, because the blood sugar is found to rise even if no carbohydrate has been given by mouth, but much of the synthesis fails and stops short, as it were, at the stage of the acetone bodies with which the blood is flooded and which appear in the breath and in the urine. In the absence of sufficient carbohydrate the metabolism of fat is disordered, whether the fat is obtained from the body fat or administered in the diet.

"When the glycogen content of the liver is high all its activities appear to be favorably influenced. When the glycogen is removed from the liver there takes place immediately a corresponding invasion into the liver cells of fat globules and it is evident that with the replacement of the glycogen by fat in the liver, the efficiency of the action of the liver deteriorates. When a plentiful supply of carbohydrate is again available the glycogen at once begins to reappear in the liver and the invading fat globules are removed.

"In states of intense excitement and of great muscular activity the carbohydrate reserves are rapidly mobilized and pass from the liver and muscles into the blood stream where they are consumed. In reaction after excitement and often exertion, when the flush and muscular tension of activity has given way to pallor and muscular laxity, the carbohydrate reserve is found to be low.

"Fatigue, then, seems associated with a state in which the carbohydrate reserves are reduced to a low level, in which the organism has to draw upon its reserve of fat and in which the liver is inactive and the muscular system low and toneless. We can never be too tired, too pale, too limp and prostrate not to be refreshed, to gain colour and tone and energy from sugar. The choice perhaps lies between alcohol and sugar, but in states of considerable exhaustion fat is always poorly borne.

"By the time school days are reached, as a rule, the symptoms which have become so familiar in early childhood have declined unmistakably in severity. Bouts of vomiting may now be things of the past; yet the underlying tendency to suffer unduly from fatigue and the too sensitive temperament remain. Of the boys and girls who grow tired and thin and pale at school a high proportion will be found, in one form or another, to have suffered from acidosis. It is as though we were dealing with a later phase of the same disorder. School life is often of itself curative of nervous troubles of all sorts and of their related manifestations such as fatigue and acidosis. But when fatigue does present itself at school it is seldom that it has not manifested itself in the preceding stages of nursery life."

It is unnecessary for me to describe the appearance of this type of child which is all too well known to us with his or her pallor, highly strung, nervous and fidgety appearance, together with the usual postural defects commencing with round shoulders and extending to the feet with their relaxed ligaments. Added to this we have the toneless vasomotor system expressed by flushes, pallor and the grey and drawn appearance.

Concerning treatment, as in every branch of medicine, it depends upon removal of the cause and this must be determined by a careful inquiry into the home and school environment and a complete investigation of the previous life history of the child, in order to determine his or her type.

From what has been said upon the nature of the biochemical changes involved in the state of extreme fatigue, it follows that something can be accomplished by the provision of a free intake of easily available carbohydrate.

"In short, in the state of fatigue, it is important to construct a diet which throws as little strain upon the liver as possible, and a free provision of sugar is perhaps more important and more efficacious than a strict limitation of fat. It would seem that the greater pace at which we live, and the greater the liability to fatigue, the more we have to rely upon sugar as a source of energy and a means of restoration. Especially is this so when alcohol has fallen out of favour as a medicinal prescription. The younger Pitt who suffered intensely from fatigue, and what would now be called acidosis, went to Cambridge at the age of 13, with a nurse in charge and a bottle of port a day to ward off his attacks. When Shakespeare wrote, sugar was a delicacy rarely found in the houses of the people. He speaks very often not of things sugared but of things honeyed. Demerara and the West Indian Islands were sufficient to cope with the need for sugar in the placid life our ancestors lived in the eighteenth century. Before the world's pace could accelerate and New York set the fashion of hustling, was it necessary that man should create a boundless supply of sugar from the sugar beet, available at a low price?"

Aside from the lowering of fat in the diet of these children it is important to give sugar at the proper time. The exhausted child seems to withstand badly even the normal and physiological starvation of the night. It is in the early morning, some twelve hours perhaps since he has replenished his store of carbohydrates, that his suffering is apt to be at its worst, that he is most pale, irritable and torpid, just as it is the early morning that commonly sees the onset of vomiting in an attack of acidosis. I have been accustomed to give these children one and one-half to two ounces of glucose dissolved in warm water and flavoured with fruit juice the last thing at night and again in the morning. Often as a mid-morning and mid-afternoon snack

it is most valuable in place of the time-honored glass of milk. To my mind, the exhibition of this simple expedient has been most successful in handling many of these cases of fatigue, even when little else is done for them.

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320 Medical Arts Building.

TUMORS OF THE SALIVARY GLANDS*

ALBERT O. SINGLETON, M. D.
AND
NORMAN DUREN, M. D.
GALVESTON, TEXAS

Tumors of the salivary glands and related gland tissues are of particular interest because of their diversity of structure and clinical course with a still greater diversity of opinions in regard to their etiology, pathology and treatment. The very prevalent mixed tumor with its variously interpreted pathologic changes and its uncertain prognosis is the center of interest and controversy, but of equal or more importance are the carcinomata and sarcomata. It has been quite difficult for pathological opinion to agree upon a prognosis and too often the clinical course does not agree with the prognosis. Since the treatment for all tumors must be influenced greatly by pathological interpretation, further study and comparison of the clinical course with the opinion of the pathologist must be made. Therefore, an analytical report of the cases of salivary gland tumor treated in the John Sealy Hospital and a comparative review of these tumors and others which have found their way into the Surgical Pathological Museum of the Medical Department of the University of Texas, is the basis of this paper.

Microscopic sections of all but two of the tumors were reviewed by one of us (N. D.) They were then submitted to Drs. Paul Brindley and Violet Keiller. The pathological diagnoses were made without reference to clinical data. A comparison of their diagnoses with those of our laboratory revealed few significant differences. Pathologically, the tumors were divisable into the mixed tumor group with its peculiar potentialities and an obviously malignant group—carcinomata. The clinical case histories correlated closely with the pathological division.

In the present series, sixty-two salivary gland and related tissue tumors have been studied. Seven of these were metastatic to the parotid and submaxillary glands. The remaining fifty-five tumors arose primarily in the salivary glands and related tissues. A complete tabulation of all the case histories is appended. The following discussion and tables review statistically the tabulated data.

Of the fifty-five tumors arising primarily in the salivary tissues, forty (72.7 per cent) were mixed tumors, and fifteen (27.3 per cent) were carcinomas, as shown in table 2. The distribution of these tumors according to location is given in table 1. Forty-two tumors were in the parotid gland alone, and of these thirteen were malignant.

The race and sex incidence of the fifty-five tumors was approximately equal. They were evenly distributed to the right and left sides of the face; 85.7 per cent of the malignant tumors occurred in males. Other series, however, have shown an equally high incidence in females.

In the mixed tumors pain or tenderness was noted in an occasional case. These, however, were usually in the cases of the recurrent or very large tumors. The malignant tumors commonly caused symptoms. More than one-half of the present fifteen were associated with tenderness, pain, or facial paralysis. The pain was occasionally radiating. Fixation to surrounding tissues was commonly met with.

The average age at onset for all the primary tumors was 38.0 years. Of these, the mixed tumors averaged 31.5 years; and the malignant tumors, 52.3 years. The preoperative duration of the mixed tumors averaged 5.40 years, whereas the malignant tumors averaged 1.24 years.* The sharp clinical differences comparable to the two histological groups is to be noted. These figures and the recurrence rates are compared and totaled with those of other authors in table 2.

The recurrence rate of the fifty-five salivary tumors is divided into two groups: that rate which recurred after excision of the tumor both elsewhere and at John Sealy Hospital and that rate recurring in the cases of patients operated on at John Sealy Hospital only. The recurrence rate should be considered in this manner because many of the cases were recurrent when first seen at this hospital. These data are available in forty-one cases. Of these forty-one, thirty were mixed tumors; ten (33.3 per cent) recurred. Of the mixed tumors in the parotid gland,

*From the Department of Surgery, Medical Branch of the University of Texas, Galveston, Texas.

*Read before the Section on Clinical Pathology, State Medical Association of Texas, Dallas, May 15, 1940.

*Because of insufficient clinical data, Case 46 was not included.

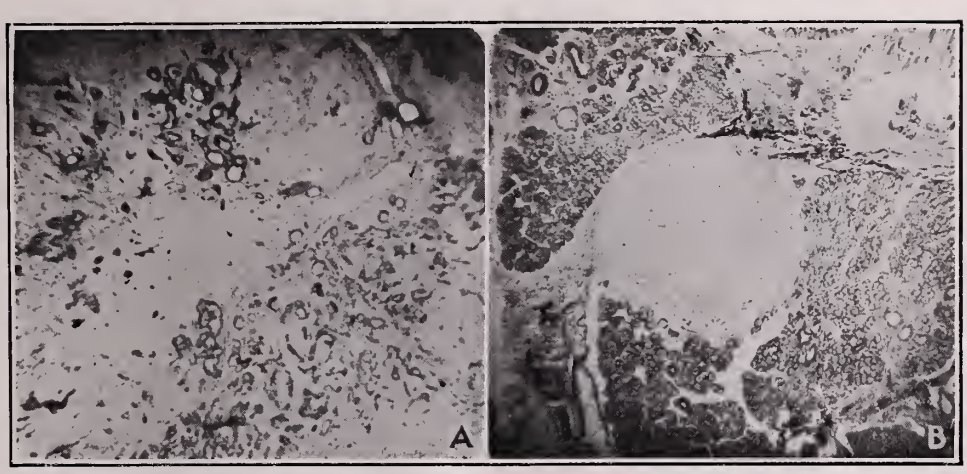

FIG. 1*a*. Photomicrograph of a mixed tumor of the parotid gland.
b. Photomicrograph of unencapsulated mixed tumor nodule in the parotid gland.

36 per cent recurred. The follow-up data are available in thirty cases of patients operated on at the John Sealy Hospital. The cases followed less than one year are not included. Six cases were followed only one year. The remaining twenty-four were followed from three to twenty-four years. Of these thirty tumors, twenty-three were mixed tumors; two (8.7 per cent) recurred. One of the two recurrences among the mixed tumors occurred in an elderly woman (Case 4). It was widely excised, but recurred in six months and after one year had reached large proportions. It was again widely excised. The case was followed for one year, at which time there had been no recurrence. This tumor showed an increased cellularity in the recurrent tumor. This, considered with the marked infiltrative character noted at operation, classifies this tumor as one of the more "malignant" of the mixed tumors.

There is considerable controversy over the rate of recurrence in relation to the size of these tumors. The cases on which sufficient data were available were computed with this in mind. McFarland, dividing his series into tumors up to a walnut in size and a walnut or larger in size, stated that 32 per cent of the former and 16 per cent of the latter recurred. Houck, however, noted 17 and 31 per cent recurrence rates, respectively. In the present series, 13.3 per cent of the smaller tumors recurred, and 40 per cent of the larger. These and Houck's findings are in direct variance with those of McFarland.

One explanation for the low recurrence rate of tumors of patients operated on at John Sealy Hospital was the use of wide excision. This was reflected in the high rate of postoperative complications, that is, facial paralysis. Ten cases among the mixed tumors were complicated by permanent facial paralysis. Of these, eight were total. Permanent facial paralysis occurred in all but two of the malignant parotid tumors operated on. Salivary fistulas rarely occurred. Two of the present series of cases were so complicated.

A pathological diagnosis was obtained in all but one of the fifteen malignant tumors. Seven were adenocarcinomas. The remaining seven were diagnosed as carcinomas, but not definitely differentiated. In four of these there was a possibility of a carcinomatous transformation in a primary mixed tumor. Unfortunately biopsy was not done in one inoperable case. Its course, however, was obviously that of a malignant tumor. Three cases (42, 51, and 55) were considered inoperable. One case (44) was treated by radium and x-ray only, without appreciably altering the malignant course. The remaining cases were widely excised. Postoperative x-ray or radium radiation was used in five cases. In one case (46), in which the tumor

TABLE 1.—*Distribution of Sixty-two Salivary Tumors.*

		Parotid Gland		Submaxillary Gland		Palate		Gum		Lacrimal	
		No.	%	No.	%	No.	%	No.	%	No.	%
55	Primary Salivary Tumors	42	76.4%	9	16.4%	2	3.6%	1	1.8%	1	1.8%
40	Mixed Tumors	29	72.5%	7	17.5%	2	5%	1	2.5%	1	2.5%
15	Malignant Tumors	13	86.6%	2	13.3%						
7	Metastatic Tumors	3 Carcinomas 1 Melanoma		2 Carcinomas 1 Melanoma							

FIG. 2*a*. Photograph of a patient with mixed tumor of the parotid gland.
b. Same case as figure 2*a*. The tumor has been widely excised. Fascial sling supporting paralyzed face.

specimen is now in the museum, operation was done elsewhere. Of the ten malignant tumors primarily excised in John Sealy Hospital, six of the patients died from progression of the malignant process. Three of the four patients now alive have been free of recurrence for approximately one year. The fourth has been free of recurrence for four months. (Cases 50, 52, 53 and 54). Regional metastases was present or occurred in eleven cases. General metastases occurred in one case. Death was directly attributable to the tumor in nine cases.

The origin, histology, malignancy, and clinico-microscopic correlations are among the more important debated issues.

Most recent contributors support the epithelial or glandular origin. According to this view the parenchymatous tissue of the mixed tumors arises from the adult gland tissue and gives rise to the mixed character by "mucinous degenration." The cartilaginous-like stroma is viewed as condensed myxoma rather than embryonic cartilage (Fry;[3] Patey[8]). Ewing[2] and Geschickter[9] support the epithelial origin but consider the disputed stroma true embryonic cartilage. McFarland[6] and Warren[10] are notable among those who continue to support the embryological hypothesis. We are inclined to favor the glandular origin for the following reasons: (1) the general similarity between the parenchyma of tumor and gland tissue, (2) the direct transition of normal gland and tumor substance as occasionally noted, and (3) the presence of unencapsulated mixed

TABLE 2.—*Comparison Statistics.*

		Singleton and Duren 55 Tumors	Swinton and Warren[10] 67 Tumors	Stein and Geschickter[9] 241 Tumors (Parotid)	McFarland[7] 300 Tumors	Houck[4] 46 Tumors	Patey[8] 55 Tumors	Total 766 Tumors	Revised Percentages
Percent Malignancy in Salivary Tumors		27.3%	12.5%	17.4%		40.5%		409	21.4%
Age at Onset in Yrs.	Mixed	31.5	33.3					122	32.4 yrs.
	Malig.	52.3	56.2					122	54.2 yrs.
Preop. Duration in Yrs.	Mixed	5.4	10.7	8				363	7.8 yrs.
	Malig.	1.24	3.6	4				363	3.5 yrs.
Recurrence in Mixed Tumors Including Those Recurrent When First Seen		33.3%	17.6%		23.2%		23.6%	477	23.8%
Recurrence in Mixed Tumors Operated at J. S. H.		8.7% (J. S. H.)	4.3% (Lahey Clinic)	12.8% (J. H. H.)				363	8.6%

tumor nodules found in otherwise normal gland lobules.

Most writers classify mixed tumors as benign but hold that a fairly high percentage (25 per cent) are either malignant from the beginning or become so; and that these malignant features are characterized by local recurrence and invasiveness rather than by distant metastases. Swinton and Warren[10] believe both carcinomatous and sarcomatous transformations occur in mixed tumors. McFarland is of the contrary opinion. There was an unusually high percentage of malignant tumors among our series.

McFarland denies any histological difference between primary and recurrent tumors, any significant histological change in rapidly growing tumors, or that the clinical course can in any way be prognosticated by the microscopic appearance. Patey[8] divides mixed tumors into four classes microscopically and attempts to show a corresponding clinical course to each type.

Our series supporting in general the views of McFarland were, however, divisable microscopically into the definite mixed tumor group and a group of tumors showing sufficient irregularity of cell detail and mitotic figures to be classified as carcinomas. The clinical correlation was above noted.

Personal communications from Dr. Paul Brindley, professor of pathology, School of Medicine, the University of Texas, and Dr. Violet Keiller, pathologist, Hermann Hospital, Houston, follow:

Dr. Paul Brindley:[1] "Most so-called mixed tumors of the salivary glands probably originate from the glandular epithelium. There has been considerable controversy as to whether true cartilage is present in these growths. What has been considered cartilage by some is apparently only a condensation of the myxomatous tissue which is so often a feature of these growths.

"The grading of malignancy in tumors showing such a varied histological picture is unusually difficult. The degree of mitotic activity and anaplastic disarrangement are points to be noted. Postoperative recurrence in these cases indicates, I believe, incomplete removal, rather than the development of another new growth in the area."

Dr. Violet Keiller:[5] "To the understanding of mixed tumors of salivary glands much confusion and delay were caused by the advancement of the endothelial theory of the origin, a theory now happily abandoned. To the theorist, endothelium appeared to stand midway between epithelium and connective tissue, and the appearance of 'myxoma' and 'cartilage' as well as the 'whorls' were thus explained; but the whorls are like those of squamous epithelium and not of endothelioma; and the cell masses present characteristic prickles. It is less easy to set aside the possible relationship to facial clefts and inclusions. Yet a congenital origin for a true mixed tumor of the parotid has never so far been demonstrated, and it would seem that if a fusion defect were responsi-

FIG. 3*a*. Artist's sketch showing operative incision for tumor and manner of insertion of fascial strips.
b. Photograph of patient with carcinoma of the parotid gland.

TABLE 3. *Salivary Gland Tumors.*

MIXED TUMORS

Case	Age Onset	Sex	Location Site	Location Side	Preop. Duration	Size	Symptoms	Recurrence Prev. to Op.	Date Treatment	X-ray Radium	Complications	Follow-up	Surg. Path. Number
1	30	F	P	?	1 yr.	I	0	Prim.	2/10/14 Excision	0	0	No recurrence in 10 years.	32
2	28	M	P	L	10 yrs.	III	0	Prim.	12/8/16 Excision	0	Fac. paral.	No recurrence in 24 years.	380
3	52 Op.	F	P	R	?	?	0	Prim.	3/29/19 Excision	0	0	No recurrence in 15 years; died 1934 of heart disease.	1024
4a	53	F	P	R	5 yrs.	III	Tenderness	Prim.	5/12/20 Excision wide	0	Fac. paral.	Recurred in 6 months.	1409
b	59	F	P	R	4 mo.	III	Pain	Recurr.	Excision rad.	yes	Fac. paral.	No recurrence in 1 year.	1634
5a	23	M	P	R	2 yrs.	II	0	Prim.*	1911, Excision	0	0	Recurred in 9 months.	
b	34	M	P	R	12 yrs.	III	0	Recurr.	2/23/24 Excision wide	0	Fac. paral.	No recurrence in 8 months; died 1930, cause unknown.	2724
6	24	F	P	R	19 yrs.	III	Tenderness	Prim.	3/10/24 Excision wide	0	Partial fac. paral. fistula	No recurrence in 16 years.	2742
7a	25	F	P	R	1 yr.	I	0	Prim.*	1916, Excision	0	0	Recurred in 2 years (4 recurrences in 10 years).	
b	34	F	P	R	1-2 yr.	I	0	Recurr. 4th	7/3/24 Excision rad.	0	Fac. paral. fistula	No recurrence in 16 years. Fistula in temple at site of infected fascial implant	2879
8a	teen	F	P	L	?	?	0	Prim.*	1909	0	0	Recurred in 2 years (2 recurrences in 8 years).	
b	34	F	P	L	6 yrs.	III	Pain, facial paral.	Recurr. 2nd.	10/15/24 Excision wide	0	Fac. paral.	No recurrence in 5 years. Died 1930 of pneumonia.	2947
9												Museum specimen; operated elsewhere.	3131
10a	10	F	P	R	5 yrs.	II	0	Prim.*	Excision	0	0	Museum specimen, operated elsewhere in all recurrences. 1st recurrence in 5 years. 2nd recurrence after 15 years. 3rd recurrence after 12 years, unoperated.	
b	20	F	P	R	5 yrs.	II	0	Recurr. 1st*	Excision	0	0		
c	35	F	P	R	15 yrs.	?	0	Recurr. 2nd.	1925, Excision radical	0	?		3418
11	32	M	P	R	2 yrs.	III	0	Prim.	5/11/26 Excision	0	0	Unknown.	3599
12						III						Museum specimen. No other data.	3760
13	15	M	P	L	7 yrs.	III	0	Prim.	10/24/27 Excision	0	0	Unknown.	3950
14	57	M	P	L	3 yrs.	I	0	Prim.	2/8/30 Excision	0	0	No recurrence in 10 years.	4561
15	40	F	P	R	6 yrs.	I	0	Prim.	10/30/32 Excision	0	Fac. paral.	No recurrence in 8 years.	5782
16	47	M	P	R	2 yrs.	I	0	Prim.	10/4/33 Excision	0	0	No recurrence in 5 years. Patient supposed to have Ca. of mouth (X-ray).	6194
17	44 Op.	M	P	L	?	I	0	Prim.	2/2/35 Tumor bed cauterized	yes	0	No recurrence in 6 years.	6628
18	25	F	P	R	4 yrs.	I	0	Prim.	2/1/35 Excision	0	0	No recurrence in 5 years.	6870
19	?	F	P	L	1.5 yrs.	III	0	Prim.	8/11/36 Excision	yes	Partial fac. paral.	No recurrence in 4 years.	7758
20	34	F	P	L	2 mo.	I	0	Prim.	4/7/39 Excision Caut. bed	yes rad.	Fac. paral. Bone slough	No recurrence 1 year. Fasc. transplant partially successful.	9503
21a	26	M	P	L	2 yrs.	II	0	Prin.*	1934 Excision	0	0	Recurred in 5 weeks.	
b	28	M	P	L	4 yrs.	II	0	Recurr. 1st.	June, '39 Excision	0	Fac. paral. temporary	No recurrence in 10 months.	9609
22	24	F	P	R	6 mos.	I	0	Prin.	9/19/39 Excision	0	0	No recurrence in 6 months.	9890
23								Recurr.				Museum specimen; operated elsewhere.	9938
24a	27	F	P	L	4 yrs.	?	0	Prim.*	1917 Excision	0	0	Recurrence after 15 years.	
b	43	F	P	L	7 yrs.	I	0	Recurr.	Oct. 1939 Excision	0	0	No recurrence in 6 months.	9950
25	34	M	P	L	20 yrs.	III	Discomfort	Prim.	Oct. 1939 Excision Tumor bed caut.	0	Fac. paral.	No recurrence in 6 months. Fascial repair—good results.	9960
26	52	M	P	L	9 yrs.	I	0	Prim.	Nov. 1939 Excision wide Cautery	0	Fac. paral.	No recurrence in 6 months. Fascial repair good.	10014
27	25 Op.	F	P	R	?	I	0	Prim.	4/12/22 Excision	0	0	Unknown.	Gyn. 977
28	34	M	P	L	5 yrs.	II	0	Prim.	none	0	0	Died, other causes.	P.M.3092

SIZE: I—Up to walnut. II—Walnut to lemon. III—Lemon and over. SITE: P—Parotid. S—Submaxillary. L—Lachrymal. Pal—Palate. *Operated Elsewhere.

TABLE 3. *Salivary Gland Tumors.—(Continued)*

Case	Age Onset	Sex	Location Site	Location Side	Preop. Duration	Size	Symptoms	Recurrence Prev. to Op.	Date Treatment	X-ray Radium	Compli-cations	Follow-up	Surg. Path. Number
MIXED TUMORS—(Continued).													
29	43	F	P	R	7 yrs.	II	Pain	Prim.	1934	Yes Two deep X-ray		Slight improvement. Subsequent course unknown.	R.W.
30	31	M	S	L	4 yrs.	II	0	Prim.	1/3/16 Excision	0	0	Unknown.	235
31	32	M	S	R	3 yrs.	II	Pressure	Prim.	7/11/25 Excision	0	0	No recurrence in 15 years.	3195
32	18	F	S	R	20 yrs.	I	0	Prim.	9/25/30	0	0	No recurrence in 10 years.	4844
33		F	S						1931			No other data.	5352
34		F	S			II						No other data.	6617
35	24	F	S	L	7 yrs.	II	0	Prim.	7/28/34 Excision	0	0	No recurrence in 6 years.	6625
36a	14	M	S	R	1 yr.	I	0	Prim.*	1922 Excision	0	0	Recurred after 3 years.	
b	18	M	S	R	10 yrs.	II	0	Recurr. 1st.	2/17/37	X-ray	0	No recurrence in 3 years.	8077
37		F	Pal.		5 yrs.	I	Sl. pain	Prim.	9/19/16 Excision Cautery	0	0	No recurrence in 24 years.	345
38	34	F	Pal.		5 yrs.	?	0	Recurr. 1st.	1/10/35 Excision	Rad.	0	No recurrence in 5 years.	6840
39	47	F	Gum	R	1 yr.	I	Pain	Prim.	1/10/40 Excision Cautery	0	0	No recurrence as yet.	10104
40	32	F	L	L	2 mos.	I	Tender-ness	Prim.	2/12/31 Excision	0	0	No recurrence in 10 years.	4995
MALIGNANT TUMORS—CARCINOMAS													
41	64	M	P	L	2 mo.	II	Pain	Prim.	1917 Excised	0	Fac. paral.	The patient died in 1918 from tbc. colitis. Reg. Metastasis.	633
42	59	M	P	R	10 mo.	I	Pain, fac. paral.	Prim.	1921	0		Biopsy. Inoperable. Course unknown. Regional metastasis.	1652
43a	47	M	P	R	2 yrs.	I	0	Prim.*	1906 Excision	0	0	Recurred in short time.	
b		M	P	R	?	III	?	Recurr* 1st.	? Excision	0	Fac. paral.	Recurred subsequently (in several years).	
c	64	M	P	R	?	III	Tender, ulceration, fac. paral.	Recurr. 2nd.	1922 Excision	Rad.	Died	Patient died on operating table. Regional metastasis.	1882
44	52	M	P	L	1 yr.	II	Fac. paral. Hoarse-ness.	Prim.	1922 Biopsy	X-ray and rad.	Radium slough.	Patient died approx. 2 years. after onset of tumor. Reg. metastases.	1893 1970
45	71	F	P	L	3–4 mo.	I	0	Prim.	7/3/25 Excision	0	Fac. paral.	Patient died 1931 (6 yrs. later) from Ca. of different origin.	3111
46			S		15 yrs.	III			Excision			Museum speeimen; operated elsewhere. Appeared malignant, Grade II, microscopically. No clinical data.	3445
47	67	M	P	L	6 yrs.	III	Ulcerated, pain.	Prim.	11/4/29 Excision	0	Fac. paral.	Patient died few weeks postoperatively. Regional metastases.	4430 4463 4464 4534
48	32	M	P	R	1 yr.	III	0	Prim.	9/19/30 Wide excision of salivary and cervical gland	X-ray and rad.	Fac. paral.	Recurrence, multiple, within next few months in the cervical glands and other tissues. Died 1/11/32.	4836 4892 4911
49	65	M	S	R	4 mo.	II	0	Prim.	2/12/35 Excision	0	0	Patient died one year later, apparently from effects of the tumor.	6889
50	52	F	P	R	2 yrs.	II	0	Prim.	12/9/36 Excised rad. 6/30/38 Excision of metast.	Rad. and X-ray	Fac. paral.	Regional node recurrence (metastases) after 15 mos. Subsequent recurrences in cervical region excised. Free 3/1/40.	7980 8760 8934
51	55	M	P	R	2 mos.	III	Pain, loss of wt., fac. paral.	Prim.	4/1/37 Biopsy	0		Patient died after 3 mos. from general metastases (carcinomatosis).	8151
52	41	M	P	R	2 yrs.	I	Pain	Prim.	2/4/39 Excised	Rad.	Fac. paral.	Regional metastases. No recurrence 2/4/40, one year later.	9348
53	47	M	P	L	1 mo.	I	0	Prim.	4/27/39 Excised	Rad. X-ray	0	No recurrence in one year. (4/1/40, free.)	9556
54		M	P	R	6 mo.	III	0	Prim.	1/31/40 Excised	Rad. X-ray	Partial fac. paral.	Regional metastasis. No recurrence in 3 mos. Prognosis poor.	10155
55	29	M	P	L	1 yr.	I	Pain with recurrences	Prim.* 5 Ops.*	1929, 1st Excision	X-ray	Fac. paral.	Tumor recurred after five operations. Deep X-ray treatment temporarily successful. Patient died in 1939 from effects of tumor.	R.F.

SIZE: I—Up to walnut. II—Walnut to lemon. III—Lemon and over. SITE: P—Parotid. S—Submaxillary. L—Lachrymal. Pal—Palate. *Operated Elsewhere.

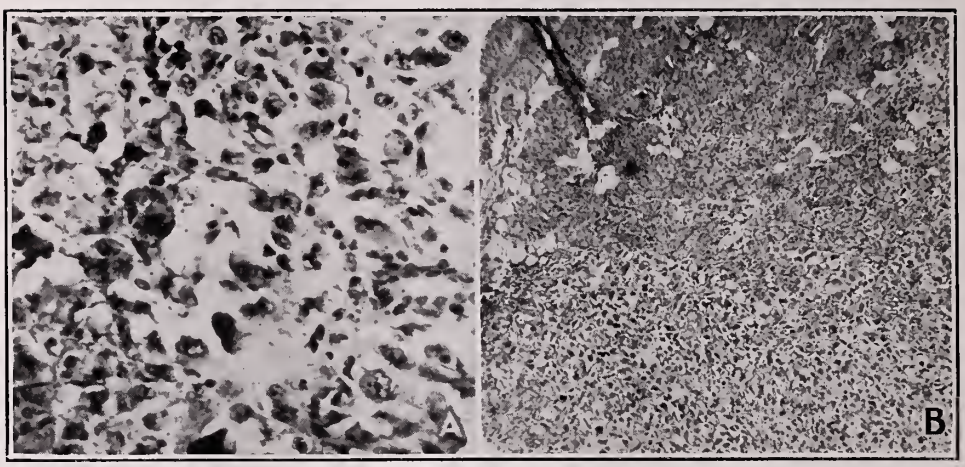

FIG. 4*a*. High-power photomicrograph of tumor shown in figure 3*a*, revealing high-grade malignancy. *b*. Low-power of same tumor, showing origin from parotid gland.

ble some at least of the many growths studied would have shown other dermoid characters such as sebum and hair. There are rare dermoid cysts encountered but these do not resemble the mixed tumor in any way. Is it not possible that the truth lies deeper than the mere proximity to the numerous fusion lines of the face? In no other region is so complicated a growth mechanism crowded into so small a compass; in none is there so frequent and so great variety of congenital defects. Is it not possible that the very complexity of the whole scheme throws out of kilter the specializing mechanism of some of the participants? This need not show as a gross error at the time of birth, just as an adamantinoma does not appear until adult life.

"Every surgeon is deeply interested in two constituents, because these have been for years his means of identification. They are 'myxoma' and 'cartilage.' I cling to the old term 'myxoma' because, whatever its nature, the name is time-honored and significant. Mucoid degeneration is present in some instances but tissue having the microscopic appearance of true myxoma is a characteristic feature of these tumors. Whether it be mucous connective tissue is another matter. In colloid carcinoma of the colon with infiltration of muscularis and serosa, areas may be found indistinguishable from the myxoma of parotid tumor, yet here there is no doubt that it originated from epithelium. Perhaps some of the small purely mucoid tumors of parotid are of this nature—adenomata or carcinomata with excessive mucus production but without other characteristics of the mixed tumor.

"The cartilage-like elements have long been subject to question. Many years ago Bland-Sutton stated boldly that 'a critical consideration of the histological features of the tissue called cartilage in parotid lesions convinces me that it is not entitled to this distinction.' He compared it to 'muco-cartilage' of the branchial bars in the lamprey, as opposed to hard skeletal cartilage; yet the resemblance to true cartilage of connective tissue origin is striking, and in section it appears indistinguishable from the cartilaginous islands seen, e.g., in myxoma and myxochondroma of bone. The similarity to inspissated secretion such as produced by mucous glands is less obvious, but one recalls the sago bodies occasionally present in appendiceal mucocele. Are not true mucous connective tissues and true cartilage possible variants of the same glucoproteins, and may not mucus and cartilage-like substance of glandular origin be similarly allied? Nature varies her patterns more than her raw materials; the biochemist is required here, not the microscopist.

"It may well be that in the future the opportunity will be given for the study of earlier lesions and from these fresh light be thrown on the problem. In the older museums will be found huge tumors such as are not seen in this day. The patient who will tolerate a tumor for forty years is now rare; even more rare his chance to escape the attention of surgeon or radiotherapist. Thus the great tumors which hung down below the angle of the jaw are fast disappearing. One might in considering the quality of their malignancy remember these older growths. They account for the observation that these tumors are essentially benign for a long period, if they be not disturbed. In years past only too often the tumor which was excised had already existed for this long period of benign growth, it had attained considerable size at the first operative attempt and had begun the rapid growth of impending malignancy before this. Henceforth more and more of these tumors will be seen when they are but two or three centimeters in diameter and careful dissection may eradicate them without deformity.

"The malignant recurrence and the metastasis of these tumors once thought to be sarcomatous in nature has long been conceded to be carcinoma. This is in conformity with the altered concept of the potentialities of epithelial anaplasia, not only in these and other mixed tumors, but in less complex carcinomata of whatever origin. Sarcomata, generally speaking, are becoming a more and more restricted group; perhaps the lessened specialization of connective tissue produces less tendency to unbridled growth than one finds in the effete epithelial society. This acknowledgement that the metastatic lesions in glands are cancerous does away with one more of the pecularities of these strange lesions; perhaps in time we will find more and more of the growths of later life, and more malignant character, fit better into the group of pure carcinomata with unusual degenerative changes than into that of the mixed tumors."

TREATMENT

Though the surgical treatment of tumors in various parts of the body has been standardized, that pertaining to the salivary gland tumors is still in confusion, with wide variations in the opinion of the profession as to the plan to follow. Recurrences are frequent

and therefore malignancy cannot be denied, but because of the infrequency of distant metastasis and the anatomic difficulty of extensive surgery without facial nerve injury, incomplete or local operation is the rule. Investigation will reveal that the early experience of the surgeon will show a strenuous effort to preserve the nerve, but with more experience and increasing number of recurrences, a more radical procedure is preferred with less regard to the nerve. Such has been our experience in dealing with the parotid tumors.

The percentage of malignancies in the parotid gland tumors vary from 17.4 per cent as given by Stein and Geschickter to 31 per cent in our series. Since local recurrences are frequent and lymphatic and blood stream metastasis less common, radical treatment is not the rule in mixed tumors. Recurrence is often delayed and the mortality from recurrence is given from 6 per cent to 10 per cent, which is apparently not sufficiently high to convince the surgeon of the necessity of radical procedure. Because of the uncertainty of prognosis the frankly malignant tumors are usually treated conservatively to save the facial nerve. Therefore we believe that conservative surgery is responsible for the high percentage of the recurrences which occur, both in the mixed and malignant tumors.

We are inclined to think that too little consideration is given to the morbidity and deformity which results from the presence of the tumor. If such is considered in addition to the mortality we believe that there is justification for more radical treatment. For some years we have felt that we were justified in removing large amounts of the parotid gland and even all the gland in those cases where we were convinced that sacrificing the facial nerve was necessary for a cure. In a few cases where the tumor has been small and situated in the lower tip of the gland, we have felt justified in isolating the facial nerve in an effort to preserve it, but in all other cases we have disregarded the nerve and extensively removed the gland. In the large tumors we prefer to do the dissection with electric cautery and by ligating the temporal and internal maxillary arteries, loss of blood is reduced to a minimum.

The facial paralysis is necessarily very objectionable but this drawback can be modified by grafts or strips of fascia in the face at the time of operation. This procedure adds but a few minutes to the operation; while the results are far from perfect, still they are fairly satisfactory. Nerve grafting is impossible because extensive destruction of the nerve and its branches is unpreventable in the complete operation.

There is the usual varied opinion as to the value of radiation. Sufficient radiation to destroy the tumor results in injury to the facial nerve as well as atrophy of the parotid gland with uncertain results as to cure. After some unpleasant experiences we believe it to be unwise to use radium at the same time of surgery. Infection will be more severe and necrosis of the mandible may result. If radium is to be used it is preferable to use it some time before surgery or after healing has resulted following surgery.

CONCLUSIONS

1. Sixty-two salivary gland tumors were studied. Seven were metastatic to the glands. The remaining fifty-five occurred primarily in the salivary tissues.
2. Fifteen (27.3 per cent) of the primary tumors were carcinomata; the remaining growths were mixed tumors.
3. The clinical histories correlated closely with this pathological division.
4. These findings were compiled and compared with those of other authors.
5. In contrast to some authors' findings, the smaller tumors when excised tended to recur less often than the larger tumors.
6. The use of a more radical operative excision was recommended. That the tumors so treated tended to recur less often was demonstrated.

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ABSTRACT OF DISCUSSION

Dr. Paul Brindley, Galveston: The importance of mucinous or myxomatous changes in tumors of the salivary glands should be remembered, not only for diagnostic purposes, but also for possible significance in the prognosis. The so-called cartilage that is found in these tumors apparently results from a condensation of the mucinous material. We should not think of this mucinous change as indicating a degree of malignancy equal to that associated with mucinous changes in carcinomas along the gastrointestinal tract, but rather that it corresponds with somewhat similar changes occasionally seen in tumors of the basal or sweat gland type. In determining microscopically the degree or evidence of malignancy in these growths, cellular arrangement is not of as much importance as the characteristic malignant or non-malignant appearance of the cells themselves.

It should be emphasized that in this series, over one-fifth of the growths were malignant, and that

these usually occurred twenty years later than did the non-malignant growths. On an average the patients with malignancies were in their fifties, while those with non-malignancies were in their thirties. The preoperative course of the malignant tumors was less than one-half that of the others. Even with this short course over one-half of the malignant tumors had associated tenderness, pain, or paralysis.

Postoperative recurrences of salivary gland tumors indicate incomplete removal. Whether more tissue is to be removed with loss of the nerve, but with a better chance of eradicating the growth, or less tissue with preservation of the nerve and possible incomplete removal of the growth, constitutes a dilemma in treating these cases. With more radical treatment the recurrences in this series have been unusually small.

Dr. Duren (closing): In closing, I want to express our appreciation to the discussers. In reply to Dr. Caldwell, our percentage of malignancies is somewhat higher than that given in most reported series and lower than those in a few. These differences are, of course, due to the different criteria used by the various pathologists. In this series, as was noted in the paper, the criterion ordinarily used to differentiate malignant and benign tumors was used. I wish to recall attention to the fact that the diagnoses were made by three different laboratories from which there was complete agreement as to the nature of the tumors. As to the mixed tumors, the findings followed closely those of other authors, that is, that 25 per cent or more show locally a malignant character. These tumors were not included in our reported percentage of malignancy.

UTERINE ENDOMETRIOSIS*

T. A. PRESSLY, M. D., F. A. C. S.
SAN ANTONIO, TEXAS

Endometriosis has gained the attention of the general surgeon, gynecologist, proctologist and pathologist, as endometrioma may be found in many locations in the abdomen and pelvis. This paper is limited to endometriosis of the uterus. This is also known as internal endometriosis, and the involvement of structures other than the uterus as external endometriosis. Only cases in which the uterus was involved have been included in the series presented here.

In 1921 Sampson[7] published his paper which aroused a great deal of interest in endometriosis. Since then he has contributed other valuable articles on this subject. As this paper is limited to involvement of the uterus I shall not discuss the various theories of etiology of this condition but shall accept the invasion theory of Cullen.

The material for this study is based on the case histories and specimens removed at 635 hysterectomies, performed at the Medical and Surgical Memorial Hospital in San Antonio from January 1, 1935, to December 1, 1939. All hysterectomies that were done during this period of time are included. The following findings are from a study of the pathologist's report of the specimens sent to him from the operating room. There were fifty-one instances of adenomyoma of the uterus and eighteen of adenomyosis—a total of sixty-nine cases of uterine endometriosis. Many of these were associated with other conditions and often the symptoms of uterine endometriosis were overshadowed by them. Practically all of these complicating conditions would, in themselves, require hysterectomy. Endometrial hyperplasia was almost constantly present. Fibromyoma, uterine polyps, fibrosis of the uterus and inflammatory diseases of the tubes and ovaries were also found.

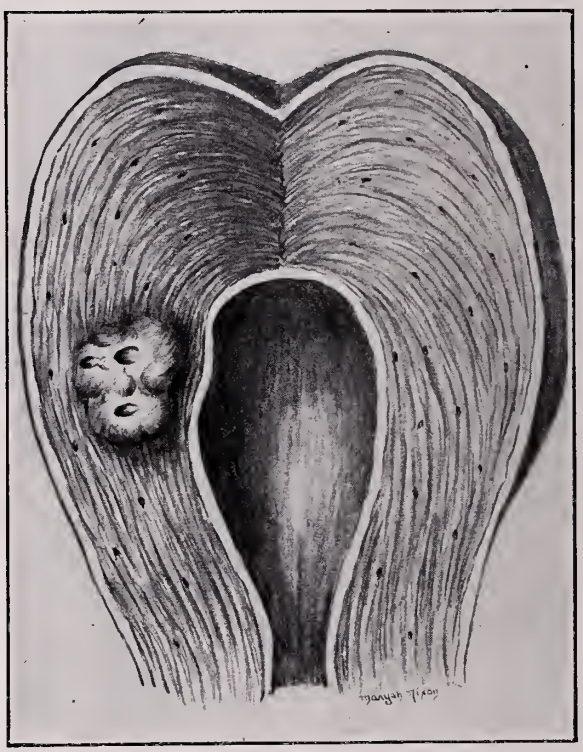

FIG. 1. Adenomyoma in the wall of the uterus showing the characteristic bulging and the cystic cavities which are lined with epithelium identical with that of the uterine mucosa.

The preoperative diagnosis of adenomyoma or adenomyosis was seldom made. The most frequent preoperative diagnosis was that of uterine fibroids. I think that a carefully taken history with special attention to certain symptoms, together with a careful examination, will materially aid in making such a diagnosis. I believe that uterine endometriosis is a clinical entity and demands surgical removal of the uterus.

The incidence in this series is 10.8 per cent, which is much higher than the 5.7 per cent of Cullen, published in 1908[3]. Hunter and Adams reported 6.7 per cent in 206 hysterectomies[4]. Mason reports a series from the Mayo Clinic of 10.1 per cent[5].

Uterine endometriosis is a condition in

*Read before the Section on Obstetrics and Gynecology, State Medical Association of Texas, Dallas, May 14, 1940.

which gland tubules and supporting stroma identical with that of the endometrium occur in the wall of the uterus far beyond the normal limits of the uterine mucosa. Mason[5] thinks the uterine endometriosis is of special interest as it represents a non-malignant invasion of normal tissue and such a condition does not occur elsewhere. MacCarty[6] is of the opinion that "The adenomyomas of the uterus are endometrial in origin, a diverticulum of the endometrium plus myomatous neoplasia." The gland tubules and the supporting stroma must be present. This lesion may occur as a circumscribed process in which the gland tubules and stroma are supported in a coarse, fibrillated fibromuscular tissue. This is an adenomyoma or it may occur as a diffuse process involving a large portion of the uterus—a diffuse adenomyoma, or

FIG. 2. Adenomyoma occurring in the cervical portion of the uterus and in connection with uterine fibroids.

as a general invasion of the wall of the uterus by the endometrium, an adenomyosis. Adenomyomas are usually small (Figs. 1 and 2), though their size varies greatly. They range from a diameter of two to three millimeters to ones involving a great part of the uterus. They are most commonly located near one horn or on the posterior surface. There was one in this series located in the cervix (Fig. 2).

On sectioning the fresh specimen there is seen a tell-tale bulge on the cut surface of the adenomyoma. This is not seen in hardened specimens. The adenomyoma is intimately blended with the surrounding tissue. It is often overlooked. Small cysts filled with a brownish material may be seen on the cut surface. These cysts are seldom large and

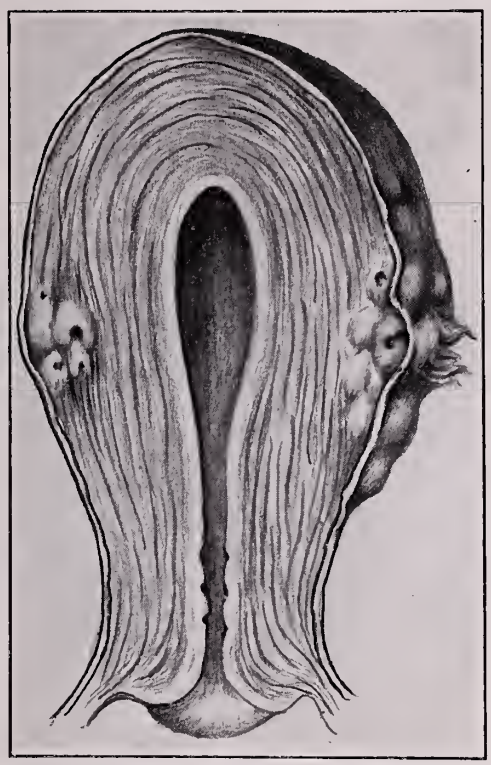

FIG. 3. Adenomyoma occurring upon the serous surface of the uterus, giving rise to adhesions to neighboring structures.

the brownish material represents epithelial activity of the gland tubules. These are sometimes spoken of as menstruating cavities. The small size of the cysts suggest that some of the secretion must either escape into the uterus or be absorbed. In only one case could a connection with the uterine cavity be demonstrated. If the adenomyoma is situated near the serous surface of the uterus this discharge may cause irritation to the peritoneum with resulting adhesions. (Fig. 3). The epithelium of these adenomyoma is subject to the same hormonal stimulation as the endometrium[8]. The epithelial activity may cause pressure in the adenomyoma with the resulting bulging, and this, in turn, may be responsible for the pain complained of by these patients. This may also explain why the pain described by some authors is worse during the menstrual flow. The size of the adenomyoma seems to bear no relation to the pain. An adenomyoma is closely blended into the surrounding uterine wall. It cannot be shelled out like an ordinary fibroid.

It is usually firmer than the wall of the uterus and may be felt in the fresh specimen as a firm mass.

The youngest patient in this series was 23. One was found in a patient of 63, who was operated on for procidentia and cystocele. It is hardly conceivable that the adenomyoma was causing this patient any disturbance. Forty-seven women were in the third or fourth decade. Some were in the early twenties. This would seem to indicate that some time is required for the full development of this condition. Many of these patients had had other operations with little benefit.

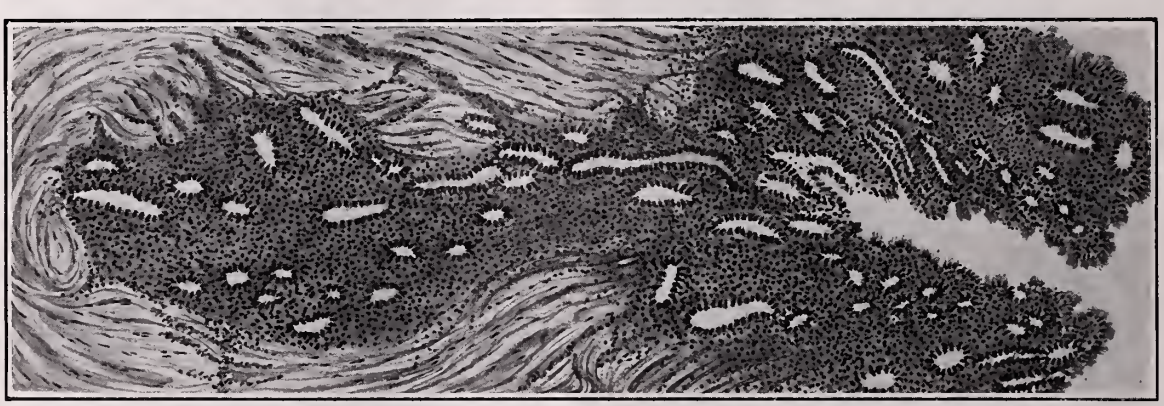

Fig. 4. Drawing of the microscopic appearance of an adenomyoma which has a connection with the uterine cavity causing a profuse blackish discharge.

Eight of the sixty-nine patients had not borne children and in four other cases there was no reference in the history to childbirth; all of the other patients (fifty-seven) had been pregnant one or more times. When this condition is advanced the patient usually ceases to be fertile.

In forty-six of sixty-four cases, pain was the most prominent symptom. In twenty-nine it was the only symptom complained of. Bleeding was the chief symptom in eighteen. The other five had various symptoms as nervousness, etc. Women may suffer bleeding in silence but pain drives them to seek aid. The pain varied greatly in different patients. Low abdominal pain on either or both sides was often recorded in the histories. Severe backache was another frequent complaint. Pain radiating down the thighs and to the rectum was also described. There was nothing characteristic about the pain. The time element is important. Most of these women complained of "cramps" either before or during the menstrual period. The usual record stated that the patient says her menstrual periods are painful. Witherspoon[8] differentiates pain associated with endometriosis from primary dysmenorrhea, in that the endometriosis type begins generally with the onset of the menstrual flow and increases as the flow continues, while primary dysmenorrhea begins one or two days before the actual menstrual flow and is relieved by menstruation. We were not able to confirm this. Dysmenorrhea occurring in a woman previously free from pain and progressively growing worse is most suggestive of an adenomyoma or an adenomyosis. An acquired dysmenorrhea is a most important symptom. Low abdominal pain between the periods was also noted. Pelvic discomfort, in some cases almost amounting to pain, was also described.

Bleeding usually took the form of prolonged menstruation or excessive menstruation. Some almost amounted to a hemorrhage. The menstrual period usually became prolonged; in some cases almost amounting to a continuous menstruation.

In the most severe cases a secondary anemia developed. One patient had a profuse blackish discharge that lasted for months. At operation an adenomyoma was found that extended directly to the uterine cavity. (Fig. 4.) Another had a profuse pinkish discharge for six months which caused a profound anemia. The associated endometrial hyperplasia may account for the bleeding. Uterine polypi may also be present and add to the bleeding. Intermenstrual bleeding is not so frequent as in cancer. None of our cases of adenomyosis was associated with bleeding. These cases were usually diagnosed as fibroids or fibrosis uteri.

Bertner[1] and Mason[5] give dyspareunia as a symptom. This was not noted in our series.

Pelvic Findings.—In these conditions the uterus is more tender than normal. A small adenomyoma, as shown in (Fig. 1) will not produce any change in either the size or contour of the uterus. A large one may produce a considerable deformity and a definite irregularity of the outline of the uterus, simi-

lar to a fibroid in such a location. When this happens in the presence of other pelvic disease it may be impossible to more than suspect it. A large diffuse adenomyoma will cause an enlargement and some change in the shape of the uterus. Adenomyosis produces a uniform enlargement of the uterus. The normal pear shape is lost to some extent as the uterus becomes more ovoid[4]. An examination just before the menstrual flow compared to one a few weeks previously should show the uterus to be enlarged. This is in line with the response of the epithelium of the adenomyoma to ovarian stimulation. A frozen pelvis would not occur unless there was a pelvic endometriosis or a pelvic infection.

A curettement might demonstrate some change in the contour of the interior of the uterus. Examination of the scrapings would show them to be either normal or those of an endometrial hyperplasia. The patient would experience little if any relief.

Diagnosis.—This condition usually occurs between the ages of 25 to 45, though it should be borne in mind that it may occur earlier. A careful history is of the greatest importance. The history should develop the location and time of the pain (an acquired type of dysmenorrhea); whether the pain is worse before or during the flow, and also the length of the menstrual period. A progressive increase in the number of the days of the flow, over a period of years, should make one definitely suspicious. Some of these patients bleed for long periods of time. Intermenstrual bleeding is not usual. An acquired sterility is found in many cases. Dyspareunia is a symptom in some cases. A history of any of the above, with any of the pelvic findings described, such as irregularity and undue tenderness of the uterus should establish the diagnosis. This condition often occurs in association with other diseases, which greatly increases the difficulty of making a correct diagnosis.

Treatment.—The activity and symptoms of an adenomyoma and an adenomyosis is dependent upon the response of these tissues to ovarian stimulation. If the ovaries are removed this stimulation disappears with a recession of the endometriosis. Removal of the endometriosis, surgical or otherwise, relieves the patient. Surgical removal of the uterus, ovaries and tubes is advocated in women over 40 years of age by Cattell and Swinton[2]. Hysterectomy is the operation of choice. I have not had any experience with the use of radium or x-ray in this condition.

Discussion.—Cullen's invasion theory has been accepted. But what causes the endometrium to become so active and to get so far from its normal location? Some time is required for the development of this condition. Hyperesterinism is considered by most writers to be the cause of such behavior of the endometrium. This is the only instance

FIG. 5. Adenomyosis of the uterus showing the penetration of the uterine mucosa between the muscle bundles of the uterus.

of non-malignant invasion of tissues by epithelial structures.

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205 Camden.

ABSTRACT OF DISCUSSION

Dr. May Owen, Fort Worth: Dr. Pressly has called our attention again to the infrequent preoperative diagnosis of endometriosis. Tentative diagnoses would probably be made more often if many of the common symptoms and physical findings just mentioned were not about as frequently associated with other abnormal pelvic conditions. However, there is little doubt that more carefully and repeatedly taken histories will improve our

diagnostic accuracy and at least make tentative diagnoses of endometriosis more frequent.

With the ever changing tissues of the uterus there would seem to be plenty of possible means for the dissemination of endometrial tissue by the venous and lymphatic circulations of this organ. The rhythm of menstrual cycle in itself keeps the uterus in a constant physiologic turmoil. During the cycle the endometrium undergoes marked proliferative changes, greatly increased vascularity, softening and thickening with an increase in the length of the glands and cellular infiltration. At the same time there is dilatation of the plexiform blood sinuses in the endometrium and myometrium; also, the lymphatics are represented within the mucosa and deeper layers by wide meshed network of channels, as well as blind-end, slightly clubbed pouches.

Dr. Meig noted the frequent occurrence of endometriosis following multiple pregnancies and thinks that the large increase in the size of the uterine cavity and the subsequent involution may have something to do with the diffuse endometrial growth. The relative sterility observed in the adenomyomas, which frequently occur in the uterine cornu, has been attributed to the obstruction of the proximal end of the tube by the new growth.

Recently Counseller called attention to the information that may be obtained from the study of endometrial biopsies in interpreting the presence and extent of endometriosis, basing the opinion on the cystic changes found in the endometrium. So far, I have not found the cystic changes constant, nor have I felt that I could express an opinion in regard to the presence or absence of endometriosis from diagnostic endometrial biopsies.

Dr. Karl John Karnaky, Houston: This is an excellent paper and I am glad that Dr. Pressly spoke only on internal endometriosis and adenomyosis. This paper combined with the many excellent photographs meant a great deal to me. Yet, I do not believe that adenomyosis or internal endometriosis is an indication for hysterectomy because many of these patients complain of dysmenorrhea (uterine pain in the contradistinction to lateral ovarian or pelvic dysmenorrhea). About 60 per cent of these patients will obtain relief after the injection of 1 cc. of 85 per cent ethyl alcohol into each Lee-Frankenhauser ganglia through the vagina. This is an office procedure in the hands of those who have used it in ten or fifteen such cases. Even myomas (known as fibroids in old terminology) are not an indication for hysterectomy in about 40 per cent of the cases. I say this because in 87 per cent of the necropsies on women at the Jefferson Davis Hospital, Houston, Texas, who have not seen a surgeon, myomas are present. These were women who died on services other than gynecology. Their ages ranged from 20 to 80 years. These women had never had to go to a surgeon for treatment, or had never had a vaginal examination by a surgeon. If three trials of the 85 per cent ethyl alcohol injection procedure fail, then operation should be done.

One thing that I would like to emphasize is the acquired dysmenorrhea as mentioned in Dr. Pressly's paper. Bleeding and sterility is not any more common in these individuals than those with any other endocrine disturbance. The series of patients studied by us in the department of gynecology, Jefferson Davis Hospital, had no more menstrual irregularities than any other women with or without internal endometriosis. This has also been shown to be true in a series of 250 cases reported by a doctor from Philadelphia, at the American Congress of Obstetricians and Gynecologists, Cleveland, Ohio, in 1939.

In regards to sterility, the patients are sterile in most cases because they do not ovulate and so do not have any corpus luteum in the blood. It has been shown by Lipschutz (Lancet 237:420, 1939) that if castrated female guinea pigs are given 80 gamma estradiol (estrogen) three times a week for from forty-seven to ninety days that they developed myomas or adenomyosis. When corpus luteum, 12 milligrams weekly, plus the same amount of estradiol (estrogen) was given to another series of six castrated guinea pigs only one out of the six guinea pigs developed myomas. Therefore, the cause of these tumors is due to the lack of corpus luteum. Lack of corpus luteum means lack of ovulation, so that is apparently the cause why these patients are sterile, and of course can be cured in approximately 80 per cent of the cases.

Far too much surgery in gynecology is being done. As an illustration doctors will not fail to attend operative gynecology clinics but it is hard to get them to come to the out-patient clinics or to the postoperative follow-up clinics. We all must admit that we like to operate.

A clue to a diagnosis of endometriosis when the abdomen is open is this: If tubal adhesions are easily freed then gonorrhea or some other infection should be suspected as the origin; if the adhesions are dense, endometriosis should be suspected. I agree with Dr. Pressly about the fixation of the female pelvic organs in many cases of endometriosis. This has been confirmed many times in the gynecological operative clinic at the Jefferson Davis Hospital. Also a fullness of the cul-de-sac is a finding, but other conditions will have to be ruled out.

Endometriosis is common, and one should be on the lookout for purplish spots in every vaginal examination and in the abdomen of every woman operated on. Endometriosis occurs in 25 per cent of all myomas and in 10 per cent of all women on whom abdominal operations are done. We find it in 25 per cent of our gynecological patients operated on by the abdominal route. We should be on the lookout for this condition.

This condition occurs more commonly in and on the ovary and in the pouch of Douglas (cul-de-sac). The presence of endometriosis in the latter leads to adhesions and a tucking up of the rectal wall to the posterior aspect of the uterus. If these adhesions to the rectum are pulled on in an effort to free them at operation a perforation of the rectum may occur which we may or may not see, leading to a resultant peritonitis and death. This is one of the causes of some unexplained gynecological deaths. We had two such cases, in which I performed necropsy.

CASE OF RARE INFECTION SIMILAR TO TYPHOID

An instance of an apparently rare blood stream infection similar to typhoid due to the organism, Salmonella suipestifer, is reported by A. E. Hardison, M. D., and A. B. Shipley, M. D., Nashville, Tenn., in *The Journal of the American Medical Association* for March 1.

The illness of the patient, a cotton mill superintendent, lasted for twenty-seven days, during which there were fever and chills followed by vomiting and profuse sweating. Death occurred from respiratory failure. Blood studies suggest that Salmonella suipestifer was the causative and not a secondary invading organism, the report says.

A study of possible avenues of infection gave no clue, but the authors say: "The possibility of a rodent-borne infection cannot be dismissed. This condition is rare, judging from reports in the literature. It may be that if thorough laboratory work was done in all cases of prolonged fever and of gastroenteritis (stomach and intestinal inflammations), the distribution of Salmonella suipestifer in man would be found more widespread."

BENIGN LESIONS OF THE DUODENUM*

R. T. WILSON, M. D., F. A. C. R.
AUSTIN, TEXAS

The duodenum is that portion of the digestive tube immediately succeeding the stomach, the first division of the small intestine. It is about ten inches in length, takes a C shaped, or U shaped course in the right upper quadrant of the abdomen. It is generally described as having four parts, as follows: (1) pars-superior—bulbus duodeni, or cap; (2) pars-descendens; (3) pars-inferior—the horizontal portion, and (4) pars-ascendens.

The clinical importance of this organ is more readily appreciated when it is remembered that within the curve there is a vital organ, the head of the pancreas, and on its anterior aspect lies the inferior margin of the liver and the gallbladder; and into the organ empties the pancreatic duct and the common bile duct. Physiologically it is subject, therefore, to considerable trauma, since the partially digested food is constantly pouring through under considerable pressure, in addition to its close relationship to the above organs, themselves so greatly subject to inflammatory reactions. An important fact, too, with reference to this segment of the bowel is that it lends itself admirably to clinical and roentgenologic investigations, many of which are now well standardized.

Among the more common lesions here, excluding tumors, should be included diverticulum, duodenitis and ulcer. Ulcerations constitute the large percentage of organic lesions indigenous to this portion of the gastrointestinal system.

Diverticulum occurs rarely and is a finding which may be easily overlooked in a routine fluoroscopic examination, since the pouches may not become filled with the opaque media as it traverses the organ at its immediate filling, but may appear later, and may even escape attention until seen in the roentgenograms. Such has been my experience in several instances even though it is my custom to observe the ingestion of the meal fluoroscopically and to follow it through the duodenum at the original observation. Because of the feathery-like margins of the organ distal to the bulbar portion, it is more difficult to recognize a diverticulum fluoroscopically. It is also observed that these lesions do not give pronounced clinical symptoms. They are, therefore, seldom suspected by the clinician and not ascribed serious significance when found. Diverticulae may be recognized here as elsewhere, by the dense rounded smooth contour of the barium-filled pouch projecting beyond the luminal margin of the organ, which is otherwise characterized by the fine serrated barium shadow of the valvulae conniventes. The emptying time of these may be prolonged far beyond that of the remainder of the organ, and thus their identity more certainly established and their significance more accurately evaluated.

Duodenitis is also an exceptionally rare condition and what is more, a most difficult one to identify roentgenologically. Kirklin has defined it as follows:

"First in importance among the signs is an abnormally increased irritability of the duodenum. In typical instances the hyperirritability is manifested in an intense spasticity and a hypermotility of the duodenum. The barium races through so rapidly that there is a scant opportunity to inspect the shadow. The bulb is frequently small and grossly deformed, both on its mesial and lateral borders, and the configuration of the deformity varies quickly from moment to moment. Further, the bulbar shadow lacks the density commonly seen in cases of frank ulcers; it is thin and indistinct and its margins are hazy. A second characteristic is the mucosa pattern which is coarsely and irregularly reticular, and is depicted as translucent islets lying in a denser network. This appearance is perhaps attributable to puckering of the mucosa by spastic contractions of its muscularis. A third characteristic of simple duodenitis is the absence of an ulcer crater. Neither marginal niche nor central fleck can be seen. Finally, uncomplicated duodenitis is marked almost invariably by absence of gastric retention or other evidence of obstruction, whereas such obstruction occurs in more than 25 per cent of cases of true ulcer. It is clear both from the roentgenologic and pathologic studies that duodenitis does not tend to produce organic stenosis. Completing the typical syndrome of duodenitis is a small hypertonic stomach with active, sometimes disordered, peristalsis. Like roentgenologic signs the foregoing marks of duodenitis vary in emphasis, and only a minority of cases are so typical that the diagnosis is obvious**."

Tumors of the duodenum are rare and when found can most frequently be identified as having origin in some neighboring structure, as the ampulla of Vater or duct of Wiersung. A few cases of leiomyosarcoma are on record. But tumors, neither benign nor malignant, are to be considered in this paper.

We are accustomed to thinking of practically every symptom referable to the gastrointestinal system as an indication demanding roentgenologic study, because the method is well established, is simple of execution and yields a high percentage of accurate results in competent hands. Vague abdominal distress, pain, nausea, eructations of food or gas, vomiting, purgation, tumor, cachexia, emaciation, hemorrhage from stomach or bowels, are among the chief symptoms requiring investigation by this method. It is often employed as a matter of elimination, to satisfy the patient, the referring physician, or to confirm or refute a diagnosis previously made.

While various secondary manifestations, the so-called indirect signs, have been de-

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scribed and extensively used, it has been the contention of the writer that the deformity of the duodenum is the one and only reliable roentgenologic sign of peptic ulcer. Indirect signs serve to stimulate more diligent search but should rarely be relied upon. These deformities vary as to form and depth and are usually described in the following terms: the niche, the protuberance, the pedunculated projection, the cauliflower-like perforation, the induration crater, the meniscus, and others. The deformity must be constant, must be uninfluenced by peristaltic action and where associated with excessive spasm must persist after the use of antispasmodics.

The abnormality or deviation from the normal smooth gastric or duodenal contour is the one unfailing evidence upon which to base a diagnosis of ulcer. The niche or projection of the opaque shadow is usually found to be in the form of a sharply defined accessory pocket or local prominence on the gastric or duodenal silhouette and may represent the ulcer crater. The indurated ulcer, however, may appear only as a localized induration, the wall having lost its normal resiliency and may not present a projecting crater but will be recognized by the meniscus-like appearance under the manipulating hand. There are associated secondary signs, such as a six-hour retention; hour glass contraction may occur, especially an incisura on the opposite curvature, but these signs are inconstant and may have other causes than ulcer. In my experience these only serve to stimulate a more diligent search and are reported for such consideration as other conditions may warrant, but are not depended upon for diagnosis. The indurations are often quite difficult and sometimes impossible to differentiate from carcinoma. In doubtful cases the radiologist should not be charged with this responsibility as very often microscopic section is required for settling the doubt. My experience is such as to suggest that any ulcers as large as 2 to 3 cm. should be considered malignant until proven otherwise.

The deformities of the duodenum are quite similar in their appearance to those of the gastric lumen but may also be associated with such secondary signs as abnormality of peristalsis, alteration of normal drainage and spasticities, but these again in turn are associated with other abdominal pathological conditions. Spasticity has been termed the arch deceiver in gastro-intestinal roentgenology and is a sign of considerable value if constant, and if it cannot be eliminated by the use of antispasmodics. When these contractions are extensive it may be difficult to locate a niche among them and one is sometimes justified in making a diagnosis in the presence of a constant deformity whether due to niche or contraction. These deformities are the examiner's essential dependence and may be found to assume many shapes. They may be located at the base, the mesial aspect or in any portion of the bulb, and may produce an irregular narrowing or a clover-leaf like appearance. A very small percentage of these may be due to cholecystitis with accompanying adhesions, pancreatitis or appendicitis or other remote inflammation which give rise to reflex spasms. We have been guilty of making a diagnosis where such conditions were the exciting cause of the deformity. On the other hand, one can generally make differentiation by careful fluoroscopic manipulation. Sometimes even in spite of dense masses of adhesions surrounding the duodenum the bulb can be made to fill normally. The dilated and sacculated bulbus duodeni, due to various forms of obstructions and sometimes without a demonstrable cause, are frequently encountered and give rise to a chain of symptoms which require careful study for differentiation.

The typical findings accompanying duodenal deformity are hypertonus, hyperperistalsis and hypermotility. As the condition becomes advanced and as cicatrical contractions and organic reduction of lumen appear, the reverse of these, especially hypotonus and hypoperistalsis may be observed, especially when any degree of obstruction occurs. Alternating periods of hyper- and hypoperistalsis may be observed in obstructive cases. After all has been said, we finally come back to the original contention that the deformities of gastric and duodenal contour which are constant and characteristic and which are carefully differentiated under fluoroscopic manipulation after extrinsic causes have been eliminated are the only dependable evidence upon which to base the roentgenologic diagnosis of peptic ulcer.

In the writer's experience it has been interesting to note that duodenal ulcer occurs four times as often as gastric ulcer and approximately four times as often in the male as in the female. In the short period of two decades these figures have practically been reversed, especially with reference to the location of the lesion. It is also interesting that about 10 per cent of patients suffering from some of the above mentioned symptoms show evidence of organic intestinal ulcerations.

It is hoped that these few notes may be of service in stimulating thought and further research on the part of the members of this society. If so, this effort will not have been in vain.

Norwood Building.

ABSTRACT OF DISCUSSION

Dr. Tom Bond, Fort Worth: This section should have more discussions of this character. Several years ago the principal volume of x-ray work was examinations of the skeletal structure. In more recent years general bone x-ray work has been divided with the surgeons and small hospitals; however, the opinion of the roentgenologist is sought in the study of gastro-intestinal conditions.

Very little can be added to Dr. Spangler's discussion of the esophagus, which was most thorough. I do, however, wish to call attention to one type of foreign body in the esophagus. This is a thin flat bone that usually stops just above the level of the sternoclavicular notch with its thinnest diameter in a lateral plane. The density is usually not sufficient to cast a shadow in the antero-posterior film, but will cast a shadow on lateral or oblique films. This offers no obstruction to thin or thick mixture of barium and sometimes not even to the cotton balls.

I feel that the media for stomach and intestinal examinations should be as palatable as possible, and given the desired consistency, I do not feel that it makes any material difference whether the media consists of plain barium and water or some form of milk and barium. I have noticed that many physicians in general practice and some roentgenologists are prone to read physical findings and historical conclusions into an x-ray study; therefore I feel that a definite history should not be taken until after a roentgenological conclusion has been reached. It is usually much more difficult to rule out a duodenal ulcer in a patient with all the symptoms than it is to find a pathologic lesion when one truly exists. I hope that we have more study of this subject in our future meetings.

Dr. Charles L. Martin, Dallas: I should like to ask the essayist whether he has ever seen a diverticulum develop in the duodenum in an adult. I recently observed a small diverticulum in the first portion of the duodenum in a patient with no change except a small questionable ulcer in this region three years previously. There were three large diverticula in other portions of the duodenum, but it is my opinion that the new lesion is an accessory pocket communicating with a perforated ulcer. So far as I know, diverticula are congentital lesions.

Too much emphasis cannot be placed on the possibility that any lesion in the lower third of the stomach may be malignant. Small defects in this region are too often regarded as benign until they become inoperable.

For a long time it has been my impression that cancer of the stomach is relatively uncommon in our part of the country, and the statistics recently published by Dr. Mountain of the U. S. Public Health service, indicate that such is the case throughout the Southern states. I also believe that gastric ulcer is uncommon in Texas. In our department at Baylor Hospital we see about ten times as many duodenal as gastric ulcers.

Dr. J. B. Johnson, Galveston: I should like to discuss one paper of this symposium on roentgenologic studies of the esophagus, stomach and duodenum, that of Dr. R. T. Wilson. Dr. Wilson states in his paper that he had been contending for two decades that the unfailing sign of the duodenal ulcer is the finding of the deformity itself, not depending on indirect signs. I am sure that it was more than two decades ago, because at that time he was making that contention, and was obtaiuing splendid percentages of diagnostic accuracy even then. It goes without saying that the finding of actual deformity is much more dependable than indirect evidence.

I wish to pay my respects to all of the essayists contributing to this symposium, because I firmly feel that the methods of presentation and beautiful illustrations given should be of very great help to any of the younger physicians in their search for lesions in this area.

THE ROENTGENOLOGIC DIAGNOSIS OF DISEASES OF THE STOMACH*

L. M. GARRETT, M. D.
CORPUS CHRISTI, TEXAS

In the present day, the diagnosis of lesions of the stomach is a very accurate procedure. However, there are still points of error which even in the most experienced hands continue to occur. This paper intends to stress these errors since the more common findings of gastric lesions are well known to all who do gastro-intestinal roentgenology.

Studies in recent years by numerous investigators have shown the great effect on the physiology and the roentgen appearance of the stomach and small intestines produced by different food materials. The greatest changes are produced by fats, and the least changes are produced by protein; but the changes produced by any food material are definite. Therefore, it is important that in all examinations of the stomach only plain barium sulphate and water be used, the usual amount being 5 ounces of barium sulphate mixed with 3 ounces of water.

Most roentgenologists at the present time will concede that, as far as the technique of stomach examination is concerned, fluoroscopy is the most important procedure. The advantages of seeing the organ as a moving, living thing and the ability to manipulate and compress the stomach are so apparent that they require no further discussion. On the other hand, good roentgenograms are also very important, not only for recording the pathologic condition as it is seen, but also for confirming or denying a fluoroscopic opinion. Then, too, some lesions, such as the superficial erosions of the mucous membrane along the lesser curvature, can only be seen on roentgenograms made with good technique.

In recent years, so-called "spot film" radiography has become very popular, and it is undoubtedly a useful invention. The main advantage of this technique is the ability of the roentgenologist to record immediately on films anything seen on the fluoroscopic screen. Because of the small size of the films used, it is possible to make numerous roentgenograms of any suspicious area from different angles and with varying degrees of compression. Very often, it is possible to obtain roentgenograms of a lesion with the spot film device that are impossible to obtain by using the conventional technique. These

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films are very important from the standpoint of keeping a record of any lesion and are also available at any time for comparison to determine progression or healing of a lesion. Sometimes an ulcer crater or deformity of the mucosa will be demonstrated on spot films that cannot be seen fluoroscopically. Due to various technical factors, spot films seldom, if ever, obtain the clarity, detail and contrast that are observed in films taken with an overhead tube and a Bucky diaphragm; and, if possible, some roentgenograms of the stomach in various positions should always be made using the conventional technique.

In examination of the stomach, it is well to follow a routine technique. A good technique is as follows: The cardiac end of the stomach is observed fluoroscopically, as the patient takes the first swallow of barium. After this one swallow enters the stomach, the barium is manipulated throughout the stomach in order to delineate the mucosal folds, and several spot films are made of different parts of the stomach with and without compression. The patient then swallows the remainder of the 8 ounces of barium suspension, and the stomach is examined in its various projections in the filled state, and other films are taken as indicated. In spite of the advance made in methods of studying the mucous membrane, the study of the filled stomach is still the most important part of the examination, because it is possible to diagnose more lesions by changes in the contour of the filled stomach than by any other method. The patient is then placed in a supine position on the table, and the stomach, particularly the cardiac portion, is viewed in several projections. After this, the head of the patient is tilted downward about 30 degrees, and he swallows some barium while the lower end of the esophagus and cardiac end of the stomach are observed from various angles. Frequently this will demonstrate small diaphragmatic hernias that cannot be visualized otherwise. During this procedure, the patient makes forced attempts at expiration in order to force any possible hernia through the esophageal hiatus. The patient is then turned to the prone position, and the stomach is again observed from different angles. Very often in this position, it is possible to fill and outline the duodenal cap that cannot be done satisfactorily in any other position.

There are a certain number of common conditions which sometimes simulate diseases of the stomach. The most common of these are extrinsic tumors, food particles in the stomach, the so-called "cascade stomach," and various types of gastric spasm. These conditions are differentiated from true organic gastric lesions by the lack of infiltration in the wall, by failure to visualize craters, by changing appearance from time to time during the examination, and from examination to examination, and by the presence of a normal mucosal relief.

The diagnosis of lesions of the body of the stomach is comparatively easy, if they are any degree of size. A few of the more important findings in common lesions will be discussed, particularly in relation to differential diagnosis.

In carcinoma, there is a large mass which protrudes into the stomach displacing barium, thereby producing a large, irregular, filling defect. A mass is practically always palpable. The ulcerations do not project beyond the normal outline of the stomach and are large and multiple. There is marked interference with peristalsis which may extend well outside the visible mass. This interference with peristalsis, and stiffness of the wall to palpation, are good indications of the extent of the carcinomatous infiltration of the gastric wall. If the lesion is very early and small and is ulcerated, the "meniscus sign of Carmen" is a very accurate sign for designating it as a carcinoma. Briefly, this sign is the visualization of a crescentric shadow of barium retained in the crater of an ulcer and elicited by manual pressure over the area of the lesion, and which shadow is inside the outline of the gastric shadow. There is usually no tenderness associated with small ulcerated carcinomas.

Benign gastric ulcers present several characteristic findings which serve to differentiate them from other lesions with fair degree of accuracy. The ulcer niche practically always is on the lesser curvature, most often near the angle of the stomach, in contradistinction to the malignant ulcers which may occur in any portion of the stomach and on either curvature. The crater always projects beyond the normal outline of the stomach and is, in other words, an "addition defect," in contrast to small ulcerating malignancies, in which case the ulcer crater often does not project beyond the outline of the stomach. The crater in benign ulcers is quite small, and any ulcer crater larger than a fifty-cent piece should be considered malignant until proved otherwise. Films to show the mucous membrance will frequently show rugae converging to the ulcer crater. There is hyperperistalsis as compared with hypoperistalsis in carcinoma, and in a large percentage of cases there is a marked pylorospasm, which occurs in only a relatively small percentage of carcinomas.

Benign tumors of the stomach are quite rare, but should be considered briefly. They

are most often seen on the walls of the stomach rather than on the curvatures and present sharply defined filling defects with no palpable mass, no induration of the wall, no interference with peristalsis and no tenderness. If they are pedunculated, they are sometimes quite movable. There is no distortion of the rugae.

As stated in the beginning, this paper presumes to discuss the more common errors in diagnosis of gastric lesions. There are two regions in the stomach in which errors of diagnosis will most likely be made. These are the cardiac end of the stomach where lesions are so easily overlooked, but are easy to diagnose when seen, and the pyloric end of the stomach where lesions are readily seen, but a differential diagnosis is extremely difficult.

Carcinoma on the posterior wall of the cardia is the most difficult lesion in the stomach to diagnose, and it is probably the most commonly missed. In every case, careful scrutiny of the cardiac end of the stomach should be made in all positions, including the Trendelenburg, and particularly while the esophagus is emptying barium into the stomach. The important points in diagnosis of cardiac lesions have been well outlined by Stewart and Illick[3] and the following discussion considers his essential points. Diagnosis of lesions in the cardia is always much easier if the cardiac sphincter is involved. Signs of obstruction in the esophagus should be noted, such as reverse peristalsis, dilatation and retention. Involvement of the lower end of the esophagus by carcinoma will often hold the cardiac sphincter open so that barium will flow through the stomach in a steady stream instead of in spurts as is seen normally. One may observe loss of pulsations in the upper end of the stomach, or the entire upper portion of the stomach may pulsate in mass with the heartbeat, due to stiffening and rigidity of the walls. The distance between the diaphragm and the gas bubble of the stomach should be noted, because malignant infiltrations will often widen this space considerably. It is often possible to outline a projecting mass through the gas bubble, either before or after barium has been ingested. In the latter case, one gets a "double contrast" effect. Sometimes, small polypoid lesions near the cardiac end of the stomach will split the stream of barium as it enters the stomach, and this is one reason why the first swallow of barium should be observed so carefully. Of course, the most easily noted signs are contraction and deformity of the entire cardiac end of the stomach, large filling defects, or marked distortion of the rugae.

The presence or absence of a lesion in the prepyloric end of the stomach is usually quite easily determined, but if a lesion is found, the difficulty then begins. In this region, there can occur carcinoma, benign ulcer, pylorospasm, hypertrophy of pyloric muscle, syphilis, benign tumor, and other rare conditions producing deformities. In some of these lesions, the type of pathologic change is often obvious, as, for example, in the napkin-ring carcinoma or the small benign tumor. Other lesions, such as benign ulcer, hypertrophy of the pyloric muscle, early infiltrating carcinoma, pylorospasm, and syphilis are very difficult to differentiate. In attempting the differential diagnosis, the following points are helpful, but are by no means specific: The defects due to spasm can usually be recognized by changes after antispasmodics, and by the fact that the spasm changes from time to time during repeated examinations. If an ulcer crater is visualized which is tender, with no palpable mass, and which heals under medical care, the probabilities are that this is a benign ulcer, although a certain number of carcinomatous ulcers will do the same thing. Kirklin[2] and Harris[1] have prescribed a group of specific signs for hypertrophy of the pyloric muscle, consisting, in short, of elongation and curling of the pyloric canal, mushroom indentation of the base of the duodenal cap, and an eccentric pseudoniche in the canal. If all of these signs can be noted, one can feel fairly safe in making a diagnosis of this condition, but all these signs frequently do not occur in each individual case.

A frequent finding in this region is that of a narrowing, involving the distal one-inch or so of the stomach, with irregular rugae, stiffening of the walls, no craters, and no evidence of pathologic change or an ulcer elsewhere in the stomach. It is in this type of lesion that it is the most difficult to determine whether or not malignancy is present, and one can never be sure whether this is an infiltrating carcinoma or an area of hypertrophic gastritis, syphilis, or the residue of a benign ulcer which has healed, leaving this deformity. If we do not feel a mass, this is a point in favor of the lesion being benign, but it is by no means an infallible rule. Benign defects are more likely to change appearance under treatment, and the involved area is usually more flexible than in malignant involvement. Sampson and Sosman[2] in a recent paper have studied a large series of cases of prepyloric deformities that came to surgery or autopsy and found that 75 per cent of the ulcerating lesions involving the distal end of the stomach are malignant. They feel that regardless of the roentgenological

or clinical findings, all lesions in this portion of the stomach should be examined histologically before one can be sure that malignancy is not present. While this might possibly be open to some argument, it certainly seems to be the best policy to explore all these cases where one is not absolutely certain as to the benignancy of the process.

In respect to the x-ray diagnosis of gastritis, it will suffice to say that insofar as our present experience goes, x-ray study is of practically no value in this condition. Occasionally, a marked localized area of hypertrophic or erosive gastritis can be suspected, but by and large, this is a rather dangerous radiological diagnosis to make.

SUMMARY

Examination of the stomach should include fluoroscopy in upright, prone, supine and Trendelenburg positions with regular roentgen films and spot films made as indicated. Only plain barium sulphate and water should be used as a medium. The most common sources of error are overlooking a lesion in the cardiac end of the stomach and misinterpreting the appearance of lesions seen in the prepyloric end of the stomach. In case of doubt, prepyloric lesions should be resected and examined histologically.

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416 Chaparral Street.

CHARACTERISTICS OF QUACKS

One of the characteristics of the quack in the field of medicine is his attempt to camouflage his ignorance by quoting the writings of reputable physicians and trying to make it appear that his work and that of the ethical physician is one and the same thing, Richard B. Phillips, M. D., Rochester, Minn., points out in the March issue of *Hygeia, The Health Magazine*.

Other characteristics by which the quack may be identified are summarized by Dr. Phillips as follows: "The quack lets every one know that he is in town by large letter advertising in newspapers, circulars, etc. Although he is quick to criticize organized and ethical medicine, he adopts the dress, office equipment and titles of the profession in so far as he is able. He hands out literature which is ostensibly scientific, and attempts to confuse and bewilder the 'sucker' with pseudoscientific statements. He presents, as a method of cure, something which is easy and simple to take, and surrounds this nostrum with an aura of magic and mystery. He always promises a definite cure in a definite time and usually with a definite number of treatments. He is always exceedingly positive and direct in answering questions, and his sureness of manner often disarms the intended victim. In cases in which an ethical physician will often admit that there is some doubt about a given situation, the quack is always positive and definite."

OPHTHALMOPLEGIC MIGRAINE*

RAY K. DAILY, M. D., F. A. C. S.
HOUSTON, TEXAS

The term ophthalmoplegic migraine is applied to a clinical syndrome characterized by attacks of severe headache and paralysis of the ocular muscles, with ptosis as a very frequent symptom. The course of the attack is about as follows: The patient develops a severe headache, which is localized to one side, starting as a rule at the temple and spreading to the occipital and frontal regions. The headache is not neuralgic in character, but is of the constant dull, harrowing type, as occurs in migraine and tumors of the brain. It is accompanied by nausea and vomiting, but not by scintillating scotoma or any of the visual sensations common to migraine. The nausea accompanies the headache but may precede or follow it. After the

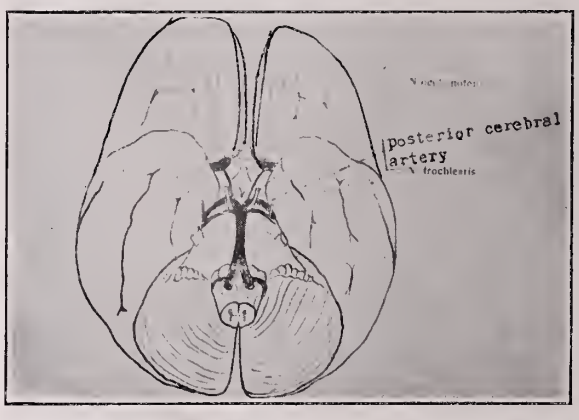

FIG. 1. Relation of oculomotor and trochlear nerves to the posterior cerebral artery. (Ehlers.)

headache lasts from one day to a week, paralysis of the oculomotor sets in on the side of the pain. The headache and nausea usually precede the paralysis and abate as the latter develops, but there are cases in which this order is reversed. The pain is localized to the side of the paralysis, and if it extends to the other side it remains more intense on the paralyzed side. The duration of the pain varies in different individuals and in different attacks of the same individual, lasting between one day and two months. The duration of the paralysis, its extent, and intensity are subject to wide variations. In most cases the muscles supplied by the oculomotor are affected. The paralysis is usually complete, but cases of isolated paralysis of a single ocular muscle supplied by the third nerve are reported. In addition to the oculomotor paralysis there are cases on record with involvement of the sixth and fourth nerves, the lower branch of the

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facial, and the trigeminus. Bilateral involvement has occurred. Visual, pupillary, and auditory disturbances are reported. Excessive perspiration, increased nasal and salivary secretion, disturbances in speech, taste, and smell have accompanied some cases.

The first case of this type was reported by Gubler[10] in 1860, although Notta[3] in 1854 mentioned six cases of trigeminal neuralgia complicated by ptosis and divergence. In 1884 Moebius[7] wrote the first extensive article on this disease, which he called "Recurrent Oculomotor Paralysis." In 1890, Charcot

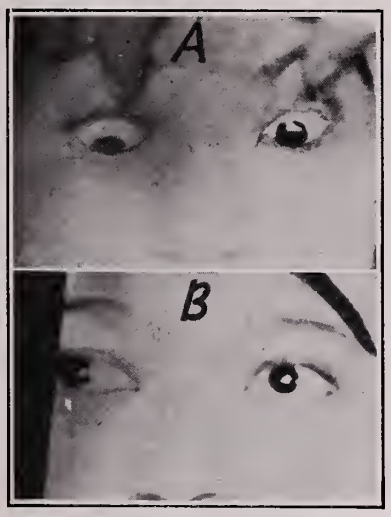

FIG. 2. (Case 2.) Paralysis of left inferior and internal recti. *A*—looking down, *B*—looking to the right.

suggested the term ophthalmoplegic migraine, and in 1896 d'Alche[1] used this term in a monograph reporting his own case and twenty-eight culled from the literature. Because this term is descriptive of the clinical picture, it found ready acceptance, and since then practically all cases of this type have been reported under this term. In 1923, Duane[3] collected about 180 cases. The early cases are thoroughly reviewed by Wilbrand and Sanger.[10]

The bizarre clinical manifestations of the disease are paralleled by the numerous theories on its pathogenesis, and on the site of the pathology. That organic lesions may produce this syndrome has been demonstrated by four cases that were examined anatomically. In Richter's and Thomsen's case,[10] in which the patient died of a pulmonary infection, a fibrochondroma was found separating the fibres of the oculomotor nerves. In Karplus'[10] case, in which attacks of migraine and ptosis set in at the age of six months, a neurofibroma the size of half a pea was found in the oculomotor, in contact with the dura. In both of these cases, there were first attacks of paralysis with intervals of perfect recovery, but finally some paralysis persisted during the intervals between the acute attacks. In Shionoya's[10] case, in which the patient died of tuberculous meningitis, there was a spindle-shaped fibroma of the oculomotor; he believed the tumor exercised a constant irritation of the surrounding tissue, and the attacks of migraine represented a summation effect. In Lange's[2] case of an old woman with recurrent ptosis and divergence of the right eye, the autopsy showed a large hypophysis, moderate hydrocephaly, and a vascular proliferation in the region of the oculomotor nuclei. These meager anatomic data do not settle the question as to whether the syndrome is produced by an affection of the nerve trunk or the nerve nucleus. Neurologists lean to the belief that the disease is nuclear; superolateral to the nucleus of the oculomotor lies the nucleus of the trigeminus. Moebius contends that an edema of the nucleus of the oculomotor could easily extend to the trigeminal nucleus and cause the headache and reflex nausea; as soon as the acute edema subsides the symptoms caused by the irigeminus abate and the paralysis remains. Ophthalmologists, however, raise the objection that a unilateral ophthalmoplegia

FIG. 3. (Case 2.) Nine years after the attack. Visual axes parallel in all directions.

could not be caused by a nuclear lesion, because the oculomotor fibers undergo a partial decussation. Bing believes that the pathologic lesion may be nuclear or peripheral. In nuclear paralysis ptosis is last to appear, after the other muscles have been paralyzed; the curtain falls on the last act. In peripheral involvement, ptosis is first to appear.

Flatau[10] believes that the basis of migraine is a pathologic change in the cerebral metab-

olism, which is not localized, but may attack various portions of the brain and thus exhibit various manifestatons, principally associated with angiospasm. Bogaert,[2] from a study of three cases, concludes that the syndrome is one of a variety of neuro-vegetative disorders, like ordinary migraine. What metabolic disorder is responsible for the attack, and what irritative factor localizes the storm in the oculomotor functions is at present not yet established. The co-existence of attacks

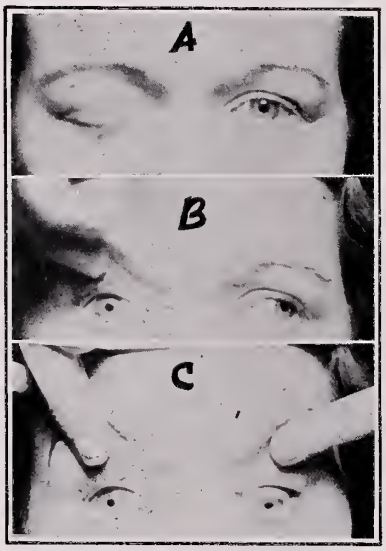

Fig. 4. (Case 3.) Ptosis and paralysis of internal and inferior recti of right eye. *A*—Straight ahead, *B*—looking to the left, *C*—looking down.

of edema of the lids, nasal congestion, and urticaria in some cases justifies the supposition that a localized edema of the type of Quincke, similar to angioneurotic cutaneous edema, may be responsible for the clinical picture. That angioneurotic edema occurs in other structures besides the skin and occurs in the nervous system has been demonstrated in an exhaustive thesis by Szugol.[8] Already in 1907 Handwerk and Schneider[2] reported a case of transient edema of the optic papilla in a patient subject to attacks of Quincke's edema.

The most plausible hypothesis is that presented by Ehlers,[4] who points to the posterior cerebral artery as the anatomical basis of a functional connection between the occipital cortex and the homolateral oculomotor nerve. The posterior cerebral arteries are the terminal branches of the basilar artery. They run a curved course, laterally, in front of the oculomotor and trochlear nerves at the point where they advance towards the cavernous sinus (Fig. 1). The position of the oculomotor in the interpeduncular fosse makes it much more vulnerable to compression by this vessel, than is the trochlear. The posterior cerebral vessel runs backwards and forms the sole vascular supply for the entire visual area in the calcarine cortex. Ehlers suggests that vascular changes in the occipital lobe are the cause of the various visual phenomena associated with ordinary migraine; pressure of the same vessel on the oculomotor nerve could cause the motor paralysis seen in ophthalmoplegic migraine.

Yu-Lin Ch'eng[11] believes that the pathologic process is a vasomotor paralysis, with distention of the vessels causing compression of the nerve and producing a paralysis of a periodic nature in the beginning; when frequently repeated the process might excite atrophy of the ganglion cells with permanent paralysis.

It seems to me hardly logical to assume the same cause for various cases reported as ophthalmoplegia. A case of persistent paralysis and a case of transitory paralysis are not likely to be caused by the same pathologic process. It seems to me, therefore, reasonable to divide ophthalmoplegia into two types: The type with persistent paralysis, which must remain under the suspicion of an organic lesion, and transitory paralysis. Transi-

Fig. 5. (Case 3.) Six months after the attack. Visual axes parallel in all directions.

tory paralysis, I believe, might be considered as a vasomotor functional neurosis of the posterior cerebral artery. If the process is a transitory angiospasm, the result is migraine with the various striking visual sensory phenomena. They vary from the fairly common scintillating scotoma, to the unusual and more picturesque stars, revolving wheels, rivers of light, gushing fountains, and fortification images. Colonel Elliott[5] in a very interesting article entitled "Migraine and Mysti-

cism" explains revelation as a visual sensory phenomenon of migraine. If the process is a vasodilatation with edema the result is a compression of the oculomotor and paralysis. The intensity of the storm is obviously greater in ophthalmoplegic migraine, the shortest attack of which lasts much longer than the severest attack of ordinary migraine. What factor directs the vascular disturbance into a spasm or dilatation, or both, will perhaps be demonstrated by some future studies in biochemistry and physiology. That psychic and emotional disturbances are important exciting factors in provoking attacks of angiospasm and angioneurotic edema has been definitely established. In the newer literature there are numerous cases of attacks of angionuerotic edema in conjunction with psychic and emotional disturbances. It thus becomes clear that emotional and psychic upheavals are probably more important from an etiologic standpoint than has been heretofore realized. And it is not unreasonable to assume that therapy directed from that viewpoint may eliminate the recurrent feature of this syndrome.

The differential diagnosis has to eliminate intracranial tumors, aneurysm of the vessels at the base of the brain, congestion of the cavernous sinus, syphilis, tabes, syringomyelia, chronic meningitis, multiple neuritis, chronic ophthalmoplegia, chronic and subacute ophthalmoplegia combined with bulbar disease and disease of the anterior horn, asthenic ophthalmoplegia, multiple sclerosis, and hysteria. These conditions are diagnosed by neurologic symptoms characteristic of each. After a complete physical examination and ruling out of organic lesions the diagnosis is not difficult. The general examination must be thorough so that when negative one may be able to reassure the patient.

The therapy is that of a functional neurosis and the prognosis is good. With a better understanding of the pathology and therapy of functional neurosis the recurrent feature of ophthalmoplegic migraine should be eliminated.

The following four cases are reported under this classification because the clinical picture of the syndrome was typical.

CASE REPORTS

Case 1.—L. A. H., age 49, had a negative family and personal history, with the exception of a chronic otitis media, which he had had since youth. I examined his eyes in 1925, and except for a refractive error they were normal. On May 25, 1938, he had a headache, which abated the next day; then he suddenly saw double and his right lid drooped. He had a ptosis of the right lid, paralysis of the right internal rectus, and paresis of the other muscles of the right eye supplied by the oculomotor; accommodation was not involved. His general examination made by Dr. Freundlich was negative. On June 2, the ptosis was better. June 21, he did not notice diplopia except in extreme lateral rotation; however weakness of the internal rectus persisted and was still present in 1930. He died in 1937 from hypertension without a recurrence of the ophthalmoplegia.

The atypical feature of this case was the absence of recurrence. The persistence of a paresis, however slight, in the rectus internus does not permit the absolute elimination of an organic lesion in the third nerve. Similar cases were reported by Koustam[6] and Wadsworth.[8]

Case 2,—Miss A. M. A., a 16-year-old Mexican girl, came to the eye clinic of Jefferson Davis Hospital, November 19, 1931, complaining of severe pain in the left eye for three weeks, and diplopia for four days. She had a paralysis of the left internus and a paresis of the vertical recti, but no ptosis (Fig. 2). Her general examination at the hospital was negative. Because I believed that the clinical symptoms were caused by an angiospasm of psychogenic origin, I gave her typhoid injections intravenously. If, as it is believed, psychogenic disturbances are a subconscious flight from a disagreeable situation, the definitely unpleasant typhoid reaction might be even more intolerable than the original situation, and so the subconscious processes maneuvering this form of escape might give it up as ineffective. After the second injection her headache was better but the oculomotor was still paretic. December 15, 1931, the externus was functioning well, except for the extreme lateral field (Fig. 3). She had eight intravenous typhoid injections. Just what effect they had on the pathologic process I do not know. The reason why more drastic types of shock therapy are effective in the treatment of brain dysfunction is also not known.

This girl married during the following year, and up to this time she has had no recurrence. It is not difficult to imagine that during her courtship she had emotional difficulties, which I believe are an important factor in precipitating attacks of vegetative neurosis.

Case 3.—Miss D. M. W., age 30, gave a history of the diseases of childhood, a cholecystectomy, pneumonia, and an amputation of one leg. Her social and economic position was definitely unhappy; she had no relatives and was earning just enough to hold body and soul together. It takes no imaginative flight to realize that her life was full of suppressed resentments and ill-digested defeats, which form the basis for internally frustrated emotional experiences called anxiety, and for their evasion by neurotic incapacitation. I saw her for Dr. Kilgore on April 29, 1939. She complained of excruciating pain. She had a ptosis and paralysis of the right internus, and inferior recti, and the superior oblique (Fig. 4). The attack set in two weeks previously with severe headache and nausea. She was exquisitely tender over the right supraorbital nerve. She had a paresis of accommodation and the pupil was dilated. The very thorough examination she had had prior to my seeing her made the diagnosis easy. She was given antispasmodics and typhoid injections intravenously. Her pain abated promptly.

July 1, 1939, the elevators of the eyeball recovered, but the depressors were still paretic. July 15, there was some weakness of the right inferior rectus, but she was not annoyed with diplopia (Fig. 5). In November, 1939, four months after the attack she fell in a cafeteria and was frightened, and because of the incapacitation lost her job. Almost immediately after the accident the right eyeball began to feel too large, the lids felt numb, and the numbness ex-

tended down to the right side of the nose. The mechanism of the neurogenic disturbances was explained to her, and she mastered this situation without any further difficulties.

CASE 4.—Mrs. O. L. L., a stenographer, 33 years of age, came November 13, 1939, complaining of diplopia. The most significant feature of her previous history was an attack of anxiety neurosis two years before, for which she was treated by Dr. P. Ledbetter, and attacks of migraine. Her work situation was unhappy in that the stenographer sitting at the next desk was a very disparaging person, who continually criticized other people. The patient was in constant anxiety lest some of these criticisms be attributed to her and involve her in difficulties with the people criticized. During the last menstrual period, one week previously, she had had an attack of amblyopia one day; the next day she was very dizzy, and on the third day she developed diplopia. She consulted an optometrist who prescribed glasses. These had no effect on the diplopia and she came in to see me in a very anxious mood. She had a paresis of the right inferior rectus, inferior oblique, superior rectus and superior oblique. In addition she had a marked nystagmus as soon as the eye deviated to the right or to the left from the central position. She was given a sedative and the probable pathogenesis of her disturbance was explained to her. She recovered in two weeks and returned to work.

This case was obviously another manifestation of physical incapacitation of a functional nature. The involvement of the right nerve and the freedom from pain are somewhat atypical, but similar cases are on record.

SUMMARY

1. Four cases of ophthalmoplegic migraine are reported.

2. The nerves involved include the oculomotor, the sixth, the fourth, the trigeminal, and the eight.

3. It is set forth that emotional disturbances are the exciting factor in precipitating the attack, and that psychotherapy is the therapeutic procedure of choice.

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Medical Arts Building.

Brown rice, which goes through a less extensive milling process than white rice, contains four times as much vitamin B_1 and three times as much minerals as the white variety, *Hygeia, The Health Magazine* reports.

PUBLIC HEALTH AND THE PRACTICE OF MEDICINE*

W. C. WILLIAMS, M. D.
NASHVILLE, TENNESSEE

I consider it a privilege indeed to have been honored by an invitation to address this association and am glad to bring greetings from the Volunteer State of Tennessee. May I assure all of you that when you come to Tennessee the latch string hangs on the outside, and all you need to get into an open or closed meeting is to say that you are from Texas.

Time does not permit a discussion of details, hence I shall devote the time at my disposal to a discussion of principles of public health and the practice of medicine, or perhaps the title would be more appropriate if it were changed to read "Public Health in the Practice of Medicine."

An analysis of past events bearing on public health and the practice of medicine as they relate to the preservation and improvement of community living reveals that the progress made has not just happened, but on the contrary is resultant of years of patient and exhaustive study and effort by men of medicine and science, whose main object in life has been to protect man and improve the environment in which he lives. President Roosevelt speaking before the Pan-American Scientific Congress less than a week ago said, "We, and most people in the world, believe in the civilization of construction and not of destruction. We, and most people in the world, believe that men and women have the right to hew out the patterns of their own individual lives, just so long as they as individuals do not harm their fellow beings. . . . We feel that we are building human progress by conquering disease—by improving science and culture, removing one by one the cruelty, the crudity and barbarism of less civilized eras."

The health of the nation has been studied perhaps not too accurately in spots, but nevertheless medical science has made its contribution and has been brought more actively into public service during recent years. Death rates from diphtheria, typhoid fever, smallpox, tuberculosis and other diseases have been reduced. Much has been learned about other health problems. Means for the prevention and control of some of these problems have been found. Control programs have been undertaken utilizing medical, lay and other resources at our disposal. In brief, much

*Address delivered before a General Meeting, State Medical Association of Texas, Dallas, May 15, 1940.

has been done toward building a healthier nation through the carrying out of the principle outlined by the Emperor Augustus centuries ago when he said, "Thrice blessed is he who has knowledge of the causes of health." We are most fortunate to be living under a flag where fine ideals of human service prevail and where our resources are not mobilized for selfish and cruel purposes. To restate a recent thought on the European conquest, it appears with the intellectual blackout that is inevitable in Europe as a result of the frightful aspects of modern warfare, we cannot help but be deeply impressed by the thought that ours is a major responsibility to keep burning the lights of intellectual and scientific leadership for the uncharted and dark days that are to come to nations now at war, and perhaps in time to our Western Hemisphere.

Public health is the mass application of the preventive medicine principles that have been developed so extensively during recent years. It has taken its place in our social order and has become a function of government because of its extreme importance in the conservation of the vital resources of the home, community, state and nation. It is one of the newer specialties of medicine, and as such must not be exploited to the extent that the functions of its parent, clinical medicine, are absorbed into the public health field. Public health programs must be restricted to recognized preventive fields. The medical profession, individually and collectively, must incorporate more of the preventive features into its routine clinical practice. There is every reason to believe that good preventive pediatric practice among the general practitioners would result in an immediate decline in the necessity and demands for increasing infant, preschool and school health services, except for the strictly educational phases of these programs which are planned to teach the need for competent medical supervision and lead to better knowledge of the basic principles of healthful living. There is some definite evidence that medical education as well as the everyday practice of medicine has not kept pace with public knowledge of disease prevention. For instance, the public health nurse can get the expectant mother, the well baby and preschool child to the physician's office, but it becomes increasingly difficult to get return visits made if the mother or child gets nothing more than an inspection of the tongue, a pat on the head and a sort of "what the devil brought you in here anyway" reception.

There is nothing unethical about checking on the immunization status of all children in the family clientele. Similar comment is applicable to other preventive services as well. If the child needs protection against smallpox at one month, pertussis at six months, diphtheria at nine months, and measles under one year, physicians should be prepared to give these protective immunizations routinely as a family service when visiting the home to see other members of the family or when the mother brings the baby to the office for a periodic check-up. The incorporation of these practices in the daily routine will eliminate the major item of contention. Most health departments furnish these materials upon request to physicians. If there is no organized health department in a city or county, it might be well to explore fully the benefits that accrue to the physician and the public alike as a result of full-time health service. We must use every available opportunity to teach the elements of personal hygiene, healthful living and the prevention of disease, because preventive measures and information are contagious and are most readily and effectively communicated to susceptibles by those having professional knowledge of the problems at hand.

Every private practitioner of medicine should be an unofficial health officer. The more the private physician does in the preventive field, the better for all concerned. I am confident, also, that the public health group will never complain about the private practitioner entering the public health field, regardless of how much he may do. Public health must not be confused with indigent medical practice, nor should the public health personnel be expected or requested to provide this service, except for specific diseases such as syphilis and tuberculosis where selected, untreated and unrestricted cases are definitely a community menace and must be controlled as any other communicable disease.

Previously, clinical medicine has been referred to as the parent of public health. Organized medicine must assume this parental responsibility because "the child" has reached a period of development where undesirable outside influences begin to beckon. To desert or condemn will lead to most unhappy circumstances. Guidance must be through public example and not attempted strangulation, persuasion or reasoning and not attempted legal restrictions, and coöperation instead of mandatory edicts; otherwise the adolescent service will be beset with undesirable temptations and importunings, political and otherwise. The majority of physicians opposing public health programs apparently do so because of two things: First, they do not un-

derstand the real objectives of a *legitimate* public health program; hence they do not see the real benefits that are possible to them and the public. Second, the only so-called public health programs that many physicians have come in contact with are what the trained public workers consider as medical assistance or medical relief programs and are not bona fide public health services. It is my candid belief that all services worthy of a public health title should be under competent medical supervision; misunderstandings will continue to arise until this policy is universally applied. The following pertinent comments are taken from the most recent general report adopted by the White House Conference on Children in a Democracy. These comments represent rather clearly the points of view at all levels. Since the report was drafted by persons from every section of the United States it is of even more interest:

"There are two great fronts in the preservation of health and the treatment of disease, whether we speak of adult or child. On the one front general measures are applied to prevent well people from becoming ill; on the other, patients are treated to restore them to health and to limit the spread of disease. . . . General preventive measures are of many kinds. Some are impersonal, like control of water supply, safe sewage disposal and sanitary inspection. In these the doctor and patient are not directly involved. Other measures do involve the medical practitioner, dentist and nurse even though there is not always a sick patient to treat. Among these are immunization and the prevention of disease due to nutritional deficiency. Diphtheria and smallpox as dread menaces of childhood are rapidly diminishing through immunizations; improved nutrition is gradually reducing the high incidence of rickets, scurvy and pellagra. . . . Akin to this type of preventive work is health education, whether by routine health and dental supervision by physician, dentist and nurse or by lectures, demonstrations, publications, school instruction or other means of public information.

"When illness strikes, the patient becomes the center of attention and recovery is the immediate goal. Medical care takes precedence over prevention and public health administration. Yet even here prevention and administration continue to be important because in most communicable diseases the treatment of the patient cannot be divorced from control of their spread. In tuberculosis and syphilis the patient is also the spreader of the disease, and treatment goes hand in hand with control and prevention. It is well to emphasize that the diagnosis of syphilis should not be made on the basis of a single positive serological test. In the absence of clinical evidence of syphilis, a second blood test and a more careful physical examination should be made before any treatment is begun. It is well to emphasize also that all cases of syphilis must receive adequate treatment and that at least one year of intensive treatment is required for the cure of any case. Physicians have a moral as well as a legal responsibility for reporting to local health officers all cases that discontinue treatment before they have received twenty injections of an arsenical or heavy metal at weekly intervals. It is the general consensus of opinion that this minimum amount of treatment is required to prevent an infectious relapse. The local health department can be of much assistance and as a matter of fact is the only agency that has the authority for getting these cases back under treatment. It is impossible, for example, to deal with tuberculosis as a public health problem without caring for the tuberculous patient as a sick person seeking recovery. The physician who applies splints to a child's leg in the early stages of an attack of infantile paralysis is practicing preventive as well as curative medicine because experience has shown that proper handling during the acute and convalescent stages results in perhaps a 50 per cent reduction of the number and degree of deformities. Much of the most effective education of the general public is achieved through the instruction in hygiene that is given to patient and family by doctor, nurse and medical institution."

It is of more than passing interest to observe at this time that differences of opinions between official public health agencies and organized medical groups in the past have all proved to be due largely to a lack of understanding on the part of each group as to the objectives of the other, and that in the final analysis there is no fundamental difference of opinion as to the ultimate objectives of public health programs. Once the objectives are understood and approved, organized medicine must support actively the approved public health program both from the standpoint of field services to be rendered as well as financial needs of the department. Public health appropriations are investments in the future security of the human race. However, an analysis of available funds for public health purposes in many areas reveals that human life and health are held cheaply if the insurance premiums in the form of public health appropriations are reliable criteria. When compared with funds for roads, public buildings, and so forth, these appropriations are relatively insignificant in size which indicates that human enjoyment services still have far more political appeal than the human betterment services.

If organized medicine is to assume definite responsibility in the formulation of policies for the conduct of public health programs, it must have adequate representation on the state and local boards of health. The state and local health officers should be the executive officers of their respective boards, since it is not feasible for a board that meets periodically to attempt to supervise the administrative or technical details of any official program. These boards should be policy forming bodies and leave the details of execution to the health officer who acts in an executive capacity for the board. Competent qualified personnel in key positions are essential to a successful program. Insecurity of position because of political bargaining and meddlesome interference from various

sources make it impossible to employ or retain career employees in professional, technical and other positions. The first responsibility of a state board of health is to see that the competent state health officer is relieved of all possible political importunings, and is given full responsibility for the selection, training and retention of competent personnel on state and coöperative local projects that are to be carried on in accordance with approved policies and accepted administrative and technical practice. Public health service can never be sacrificed for political expediency with the expectation that the quality of service will not be seriously impaired, and that the public health official who follows such a practice can evade the death warrant he signed for his career as a free-acting and fully responsible public official.

Every practitioner of medicine has a moral as well as a legal responsibility to report certain communicable diseases, births and deaths to the responsible health agency. These records are the bookkeeping of health, life and death of the community, state and nation. They are no more accurate than the accuracy and completeness of reports prepared by the physicians filing them. These records when analyzed contain a veritable gold mine of information for physician and health worker alike. The health worker can study the communicable disease and other reports by season, geographical distribution, race, age, etc., over a period of time and use these data in planning more effective programs. The medical profession can use these reports in planning programs for the reduction of mortality as well as morbidity. For instance, the Tennessee State Medical Association used data on obstetric and infant deaths to determine what special problems in these two fields should be emphasized in the special postgraduate courses in obstetrics and pediatrics that have been conducted on a coöperative basis during the past three years.

Private physicians in the generalized or specialized fields must begin to practice more preventive medicine. It is quite probable that the curricula of most medical schools have not yet reached the point where preventive medicine and preventive pediatrics are given an excessive amount of time. Much can be done in both fields among practicing physicians through the inauguration of postgraduate courses of instruction (seminar type) by State Medical Associations. State health department funds can be used to good advantage to assist organized medicine in these programs. The official health agency can get expectant mothers to register with the family physician early in pregnancy; well babies and preschool children brought to the physicians' office for a periodic check-up; children of all ages will come in for the correction of all types of defects; tuberculosis cases are found and referred to the private physician for private care; various immunization materials are available without cost upon request; treatment materials are to be had for venereal disease cases of the lower economic levels; laboratory service is provided for diagnosis of the more common communicable diseases; public health nursing service can be used by the private physician in getting his instructions for prenatal, infant, tuberculosis and other cases carried out more intelligently in the home. We can't expect patients to continue to return unless they receive better preventive care and instructions. Much can be done in the field of adult hygiene; however, the most productive efforts will be in the field of child hygiene and in the control of preventable diseases. There are many specific measures for carrying out the latter. *Education,* lay and professional, is the keynote for success in the former. It behooves all of us to bear in mind that the thermometer of child health and conduct fluctuates directly with the type of preventive medical care and parental interest, direction and attention given during the early years of the child's life. It is a challenge we cannot afford to ignore.

BLOWFLIES MAY CARRY DANGEROUS ORGANISMS

While there are no true poisons emitted by blowflies or contained in their bodies, such flies may carry organisms to human beings which may cause digestive disturbances or the onset of diseases such as dysentery or typhoid, *The Journal of the American Medical Association* for March 1 says in answer to inquiries about the possible ill effects from swallowing flies.

"Blowflies breed in decaying animal matter and feed on various types of organic débris." *The Journal* explains. "They are, therefore, more or less laden with germs of various kinds.

"There are instances in which blowflies have been swallowed without producing any ill effects. P. F. Fattig, of Emory University, reports having twenty-five different people drink carbonated water in which from one to several green bottle flies had been soaked for several days. No ill effects were observed by any of these persons."

SELECTION OF BLOOD BANK DONORS

Only those persons who have been born in this country and who have never lived in districts where malaria is prevalent should be used as donors for blood banks, Ernest F. Gordon, M. D., Yonkers, N. Y., advises in *The Journal of the American Medical Association* for March 22. He says that such a policy will minimize the possibility of spreading the disease from man to man. The first recorded case of an accidental transmission of malaria through transfused stored blood is reported by him.

FORT WORTH

ROSCOE ADY*
(Manager, Publicity Department, Chamber of Commerce.)
FORT WORTH, TEXAS

Fort Worth. The very name suggests a military post, and such it was in the beginning. In 1849 General Winfield Scott sent a troop of dragoons to North Central Texas to establish an army outpost, for protection of the scattered settlers from marauding Indians. It was given the name Camp Worth in honor of General William Jenkins Worth, one of the outstanding heroes of the Mexican War. A few months later the name was changed by the War Department to Fort Worth.

When the War between the States got under way Fort Worth was still a straggling frontier village, with a total population of only a few hundred souls. Many of these joined the armies of the Confederacy. At the close of the war, thousands of Confederate Veterans, defeated, but undiscouraged, turned their faces toward the West. These men of Tennessee, Kentucky, Georgia, Alabama and Mississippi, in great numbers, headed toward Texas, and many of them found a new home in Fort Worth. In a large measure, this group was responsible for transforming the frontier village into a thriving city.

When the United States entered World War No. 1, Fort Worth again became a bustling military camp. Camp Bowie, where the Thirty-Sixth Division trained, was established on the western outskirts of the city. Within a radius of fifteen miles of the city, three great aviation fields were established, where American and Canadian flyers were trained. Among the troops stationed here were instructors from Canada, Great Britain, France and Italy. The total number of troops stationed at the camp and at the flying fields was more than 50,000.

Now, with the world upset, and with the United States undertaking a vast defense program, Fort Worth is again an important center of defense activities. To the west, vast army cantonments at Mineral Wells, Brownwood and Abilene, are just now being completed. They will house a total of approximately 75,000 men. At Hicks Field, imdiately north of the city, several hundred aviation cadets are being trained.

*Deceased March 12, 1941.

FIG. 1. (Left) Hotel Texas, headquarters for the annual session, in which all of the scientific activities will be held with the exception of the sessions of the Section on Public Health, and the City and County Health Officers Conference. The Registration and Information Bureaus will be located on the Mezzanine Floor of this hotel; the technical exhibits in the Lobby and on the Mezzanine Floor, and the scientific exhibits on the Fourteenth Floor. The President's Reception and Ball will be held in the Crystal Ballroom, Fourteenth Floor of this hotel.

(Right) The Blackstone Hotel, two blocks north of the Hotel Texas on the same side of Main Street, headquarters for the Woman's Auxiliary. All visiting ladies will register on the Mezzanine Floor of this hotel. The City and County Health Officers Conference will be held in this hotel on Monday, May 12, and the sessions of the Section on Public Health will also be held in this hotel on Tuesday afternoon, May 13, and Wednesday morning, May 14.

Fort Worth has been selected as the site of a bomber assembly plant, which will be built by the Federal government and operated by Consolidated Aircraft Corporation. Giant, four-motored bombers will be assembled. The Fort Worth plant will produce one-half of the government's quota of these enormous flying fortresses.

The cost of the plant is variously estimated at from $10,000,000 to $15,000,000. It will furnish employment to from 12,000 to 20,000 men, and will have a pay roll of a half million dollars per week.

In connection with the plant, the City of Fort Worth is planning one of the greatest industrial airports in the country, with runways up to a maximum length of 7,300 feet.

It is conservatively estimated that the establishment of this great industry will bring about an increase in population in Fort Worth of a minimum of 50,000 people within the next eighteen months. This number of additional residents will require the erection of at least 10,000 houses and apartments.

The establishment of the great army cantonments, for which Fort Worth, in a great measure, serves as the supply center, and the announcement of Fort Worth's choice as the location for the bomber plant, have had a vastly stimulating effect upon business. Real estate transactions in January, 1941, were more than double those in January, 1940. Retail sales during January, 1941, showed a larger increase over January, 1940, than was recorded in any other principal city in Texas. Bank clearings are up 30 per cent.

The final census figures for 1940 showed the population of Fort Worth, within the city limits, to be 177,662. The population in the metropolitan area is approximately 207,000.

Fort Worth is the largest livestock market and packing center in the entire South. There is paid out annually for livestock marketed in Fort Worth more than $90,000,000, and packing house products have an annual value of more than $50,000,000. It is the largest terminal grain market and flour and feed milling center in the entire South. It is located in the geographical center of the world's greatest oil producing region, and more than 60 per cent of all producing oil wells being brought in in the State of Texas are located in the Fort Worth trade territory.

For many years Fort Worth's park system has been regarded as one of the finest in the country. Within the past few years the addition of new parks and municipal golf courses, and the conversion of all school grounds in the city into neighborhood recreational centers has given Fort Worth a total park and recreational area many times greater than that of the average American city. The total number of parks, parkways, triangles, recreational areas and improved school grounds is 115, with a total area of 10,342.56 acres. Based on an estimated population of 200,000 this gives the city an acre of park land for every twenty persons as against a National average of one acre for every 100 persons.

In order to insure an adequate water supply, the City of Fort Worth in 1913 undertook the construction of a dam on the West Fork of the Trinity, a few miles northwest of the city limits. The project was completed in 1916 at a cost of approximately $2,000,000. The reservoir which formed above the the dam was christened Lake Worth. Its water area is 5,302 acres and there are 2,704 acres of surrounding land owned by the City. The meandering drive along the shore line is lined with summer cottages and more than 1,000 families make their permanent homes on the lake shore.

Above Lake Worth, as part of a $6,500,000 flood control and water conservation project, two great dams were completed, and behind them two of the most beautiful lakes in the South have formed. The dam at Eagle Mountain Lake is 4,500 feet long and 80 feet high. The surface area of the lake is 9,700 acres. The Fort Worth Boat Club recently completed a fine club house of native stone and from the broad verandas a marvelous view of the lake may be had. Sailboat races are held on Saturdays, Sundays and holidays throughout the spring, summer and fall. Similar races are held on Lake Worth by the Lake Worth Sailing Club, and occasional outboard motor races on both lakes. It is estimated that on the two lakes more than 1,000 boats of various types, from cabin cruisers down, are in operation.

The dam at Lake Bridgeport is 2,000 feet long and 100 feet high. The surface area of the lake is 10,000 acres; the normal average depth is 30 feet.

Fort Worth is one of the few cities in the country which provides for every public school pupil an individual seat in a modern, fireproof school building. A school building program initiated in 1934 included the construction of thirteen new buildings, major additions to thirteen existing buildings and the complete rehabilitation of all others. This program involved the expenditure of $4,250,000. At the same time provision was made for the enlargement of all school grounds where ample space was not already available, and in purchasing the sites for the new buildings, large areas were provided for each.

In conjunction with the school building program, the sum of $3,681,757 was expended upon the landscaping and beautifi-

FIG. 2. Some of Fort Worth's fine public hospitals.

cation of school grounds, with the objective of converting each of the school grounds into a neighborhood community center. During 1938 construction of a high school stadium was begun and $377,666 was provided for this purpose.

For forty-five years the Southwestern Exposition and Fat Stock Show, held annually in March at Fort Worth, has been one of the outstanding entertainment features of the Southwest, as well as one of the largest livestock shows in the country. More than 6,000 head of the best thoroughbred cattle, horses, sheep, goats and swine are exhibited annually. The Horse Show held in connection with the Stock Show, attracts the finest horse flesh from the Middle West and the South.

The big feature, however, is the World's Championship Rodeo, typical of the early days of the Southwest, and quite as thrilling to the thousands of cattlemen who visit the show annually as it is to the uninitiated. Most of the national champions, many of whom live in Fort Worth, take part in the various contests. Cowboy bare-back bronc riding, trick and fancy roping, calf roping, bronc riding, steer wrestling and steer riding are supplemented by Cowgirls' championship bronc riding and trick and fancy riding.

Fort Worth has twelve major hotels, with approximately 2,300 rooms. Several of these rank with the finest in the country, offering everything that could be desired in comfort,

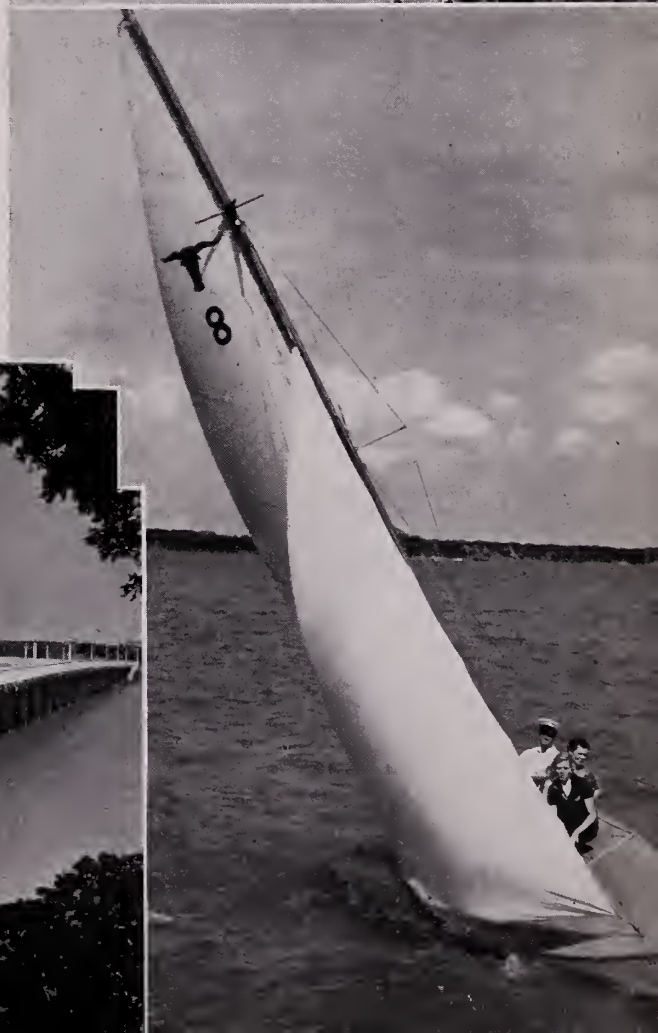


FIG. 3. A few scenic views of outstanding attractions in and near Fort Worth.

Above, the Fort Worth Botanic Garden, a far famed beauty spot.

Upper right, the approach to the Botanic Garden through beautiful Trinity Park.

Below, the bridge spanning the upper part of Lake Worth on the Northwest Highway, leading to Eagle Mountain Lake. Lake Worth and Eagle Mountain Lake are exceedingly attractive bodies of water which afford fishing, hunting, bathing, sailing and motor boating. Lake Worth covers 3,660 surface acres and Eagle Mountain Lake, 9,600.

Lower right, sail boat on Eagle Mountain Lake.

convenience and luxury. Service is excellent and rates are moderate. Famous dance orchestras and top-notch floor shows make the ballrooms of the larger hotels popular gathering places.

The friendly spirit of its people, its magnificent new coliseum and auditorium, excellent transportation facilities, superb hotels

and many varied amusements and recreational attractions have combined to make Fort Worth one of the leading convention cities of the South. Every facility for the comfort and convenience of convention delegates is provided. In late years, many organizations have held their gatherings year after year in Fort Worth.

Fort Worth has eight hospitals, with approximately 1,700 beds. The city is fortunate in having among its medical fraternity some of the finest physicians and surgeons in the country, whose reputations extend far beyond the limits of the State, and this attracts many patients from various parts of the State to Fort Worth for hospitalization. Permanent headquarters of the State Medical Association of Texas are located in Fort Worth, where the association's journal is published, and a large medical library is maintained.

The most recent addition to hospital facilities in the city is the United States Public Health Service Hospital, designed for the treatment of narcotic addicts and the study of narcotic addiction. This institution consists of more than fifty buildings, located on a site of 1,200 acres a few miles southeast of the city. It has facilities for 1,000 patients, and was erected at a cost of $4,500,000.

Program and Announcements
of the
SEVENTY-FIFTH ANNUAL SESSION
of the
State Medical Association of Texas
May 13, 14, and 15, 1941

FORT WORTH, TEXAS

GENERAL MEETINGS

OPENING EXERCISES
Tuesday, May 13
9:00 a. m. to 10:30 a. m.
Crystal Ballroom, Fourteenth Floor, Hotel Texas

C. O. TERRELL, M. D., Chairman, General Arrangements Committee, Fort Worth, Presiding.

Invocation.

DR. J. N. R. SCORE, Pastor
First Methodist Church, Fort Worth.

1. *Address of Welcome* (10 minutes).
R. H. GOUGH, President, Tarrant County Medical Society.
2. *Greetings from the Woman's Auxiliary to the State Medical Association of Texas.*

MRS. WILLIAM HIBBITTS, Texarkana, President Woman's Auxiliary to State Medical Association of Texas.

3. *Presentation of Past Presidents.*
4. *President's Address:* (30 minutes).

PRESTON HUNT, M. D., Texarkana, Seventy-sixth President, State Medical Association of Texas.

(Ten minute recess.)

MONDAY, MAY 12	TUESDAY, MAY 13	WEDNESDAY, MAY 14	THURSDAY, MAY 15
REGISTRATION AND SPECIAL SOCIETIES	8:00 A. M. REGISTRATION	8:00 A. M.—12 NOON SECTION MEETINGS (8 SECTIONS)	8:00 A. M. HOUSE OF DELEGATES ELECTION OF OFFICERS
ALLERGY NEUROLOGY RAILWAY & TRAUMATIC SURGERY HEART DERMATOLOGY ORTHOPEDICS ANESTHESIOLOGY GASTRO-ENTEROLOGY & PROCTOLOGY HEALTH OFFICERS CHEST PHYSICIANS PHYSICAL THERAPY	Visit Technical and Scientific Exhibits	Visit Technical and Scientific Exhibits	Visit Technical and Scientific Exhibits
	9:00 A. M.—10:30 A. M. OPENING EXERCISES	12:45 P. M.—2:45 P. M. CLINICAL LUNCHEONS MEDICINE AND PEDIATRICS SURGERY, OBSTETRICS, & GYNECOLOGY EYE, EAR, NOSE AND THROAT	9:30 A. M.—11:45 A. M. GENERAL MEETING
	10:45 A. M.—12:15 P. M. GENERAL MEETING		Visit Technical and Scientific Exhibits
	1:30 P. M.—5:30 P. M. SECTION MEETINGS (8 SECTIONS)	Visit Technical and Scientific Exhibits	12:15 P. M.—2:15 P. M. COMBINED SECTIONS LUNCHEON
10:00 A. M.—12 NOON HOUSE OF DELEGATES		3:15 P. M.—5:00 P. M. GENERAL MEETING	
Visit Technical and Scientific Exhibits	Visit Technical and Scientific Exhibits	Visit Technical and Scientific Exhibits	
1:00 P. M. HOUSE OF DELEGATES	6:00 P. M.—8:30 P. M. ALUMNI BANQUETS SPECIAL GROUPS	5:15 P. M.—6:15 P. M. MEMORIAL SERVICES	2:15 P. M.—5:10 P. M. COMBINED SECTIONS MEETING
		6:30 P. M.—7:45 P. M. FRATERNITY BANQUETS	
	9:15 P. M. PRESIDENT'S RECEPTION AND BALL	8:00 P. M. HOUSE OF DELEGATES	
Visit Technical and Scientific Exhibits		9:30 P. M.—1:00 A. M. TARRANT COUNTY SOCIETY ENTERTAINMENT	

GENERAL MEETING

Tuesday, May 13

10:45 a. m. to 12:15 p. m.

Crystal Ballroom, Fourteenth Floor, Hotel Texas

PRESTON HUNT, M. D., President, Presiding.

1. (10:45 a. m.) *The Importance of Physical Diagnosis in the Practice of Medicine.*

RALPH H. MAJOR, M. D., LL. D., Kansas City, Mo.
(Guest of the Section on Medicine)
Professor of Medicine, University of Kansas School of Medicine.

Consideration of the importance of the knowledge of physical diagnosis in the diagnosis of disease. The improvements in diagnosis by instruments of precision has not made physical diagnosis obsolete, but has rather refined it and made it of greater value than ever.

2. (11:15 a. m.) *Hypertension in Pregnancy.*

E. D. PLASS, M. D., Iowa City, Iowa.
(Guest of the Section on Obstetics and Gynecology)
Professor and Head of the Department of Obstetrics and Gynecology, State University of Iowa.

Elevations of blood pressure beyond the generally recognized normal maximums of 140 systolic and 90 diastolic constitute the most common serious abnormality of pregnancy. Hypertension is the most significant sign of toxemia of late pregnancy, a disease which is responsible for a considerable percentage of maternal deaths. Classification of the toxemias into (1) pre-eclampsia, (2) eclampsia, (3) chronic hypertensive cardio-vascular-renal disease, and chronic nephritis emphasizes the multiple nature of the disease.

All hypertensive cases occurring in 1940 among more than 1,800 obstetric admissions, and the eclamptics among 13,000 deliveries will be analyzed. The former study will justify the statement that basic vascular disease is the most frequent etiologic factor precipitating the toxemia syndrone, and that age, parity, heredity, and obesity are important contributors. The prognosis varies with the extent of the blood pressure elevation.

Among seventy-two eclamptics there were five fatalities, a seven per cent mortality. Medical treatment was employed with reliance particularly upon adequate sedation. Three deaths occurred among twenty parous eclamptics who presented evidence of chronic vascular disease, thus stressing again the dominant role of preceding blood vessel damage.

3. (11:45 a. m.) *The More Recent Advances in Ophthalmology.* (30 minutes).

ALGERNON B. REESE, M. D. New York, City.
(Guest of the Section on Eye, Ear, Nose and Throat)
Attending Surgeon, Institute of Ophthalmology; Ophthalmologist, Memorial Hospital for the Treatment of Cancer and Allied Diseases; Consulting Ophthalmologist, Roosevelt Hospital.

The more recent advances in ophthalmology will be reviewed and those features discussed which are of general interest. The subjects included will be aniseikonia, corneal grafting keratectomy, Sjorgren syndrome and its treatment, toxic amblyopia and its treatment, light threshold studies and chemotherapy. The present status of less recent advances will be mentioned such as the operative treatment of retinal detachment, orthoptic exercises, contact glasses and acquisitions to our means of examination such as angioscotometry and gonioscopy.

GENERAL MEETING

Wednesday, May 14

3:15 p. m. to 5:00 p. m.

Crystal Ballroom, Fourteenth Floor, Hotel Texas

PRESTON HUNT, M. D., President, Presiding.

1. (3:15 p. m.) *Award for Best Two Scientific Exhibits Displayed at the 1940 Annual Session of the State Medical Association of Texas.*

2. (3:20 p. m.) *Present-Day Possibilities of Endocrine Therapy in Pediatrics.*

F. W. SCHLUTZ, M. D., M. S., Chicago, Ill.
(Guest of the Section on Pediatrics)
Professor of Pediatrics and Chairman of the Department of Pediatrics, the University of Chicago; Chief of Staff, Bobs Roberts Memorial Hospital for Children, the University of Chicago; Consultant, Children's Memorial Hospital, Chicago.

Therapy in pediatric endocrine problems has made progress, especially in better recognition and definition of important interrelationships of the different endocrine functions.

The classical treatment of thyroid dysfunction is quite unchanged. Much progress has been made in prevention and in proper emphasis on optimal dosage and time of treatment. This results in better social adjustment and more favorable somatic change of the hypothyroid case.

The manifold functions of the pituitary gland are well recognized and increasingly identified but the practical therapeutic application of such knowledge is still meager. There is great promise for the future.

Discovery of the chemical formulae of the definitely known pituitary hormones will bring intelligent therapeutic application.

The greatest advance in identifying levels of these materials in the blood stream has been made in gynecology.

The least spectacular results are seen with growth hormone preparations. They will probably not improve until the hormone is more specifically isolated and more potent preparations result.

It has so far not been possible to reproduce in the human subjects effects readily produced in experimental animals.

The best therapeutic results have been obtained with gonadotropic substances.

Estrogenic therapy has great promise and is today an established therapeutic procedure.

It is not so much what we actually and practically have today but rather the outlook for the immediate future which promises much in this field.

3. (3:50 p. m.) *Angina Pectoris—Etiology, Differential Diagnosis and Treatment.*

W. J. KERR, M. D., San Francisco, Calif.
(Guest of the Section on Medicine)
Professor of Medicine, University of California Medical School; Physician-in-Chief, University of California Hospital; Consulting Physician, San Francisco City and County Hospital.

For purposes of discussion it is assumed that a symptom complex called angina pectoris is a result of local ischemia in the myocardium. This may arise when the metabolism or demands of the heart muscle for oxygen are greater than can be met by

the available vascular supply. Anything which increases the work of the heart or diminishes the flow of blood to the heart or reduces the quality of the blood may provoke attacks of pain. In most patients pain is precipitated by faulty movements of the diaphragm, seen in the obese with postural emphysema and in the older group of slender persons who have visceroptosis. In most cases pain can be prevented by the use of an elastic supporting belt followed by gradual reduction in the weight, and finally postural exercises.

4. (4:20 p. m.) *The Present Status of Surgical Procedures in the Biliary Tract.*

ROSCOE R. GRAHAM, M. B., F. R. C. S.
Toronto, Canada.
(Guest of the Section on Surgery)
Assistant Professor of Surgery, University of Toronto; Senior Surgeon, Toronto General Hospital.

Surgical procedures in the biliary tract have evolved through the stage where operation was only undertaken in the most desperate case, when drainage was done, often stones being left, with a high mortality and a high morbidity. This was followed by removal of the calculous gallbladder, and a brilliant increase in the satisfactory results, leading to wholesale oblation of the non-calculous gallbladders, with disastrous results, followed by a dye test for gallbladder function. This led many to discard the all-important analysis of the clinical history in the light of the physical examination. This led again to unhappy results.

Study of patients reveals that the unmarried nulliparous female very infrequently suffers from calculous cholecystitis; that the number of non-calculous gallbladders removed is very small; that the failure in our earlier series in patients operated on for calculous cholecystitis was due to overlooking common duct stones; that the indication for operation be recurring colic, indicating the presence of stone and the exploration of the common bile duct if the common bile duct is thickened or dilated, or if the head of the pancreas be thick, or if jaundice be present or there is a history of jaundice in the past. One will find that there is an average of 20 per cent stones in the common bile duct in cases of calculous cholecystitis. Palpation does not reveal these stones.

Limiting operation to the patients with stone, and exploring the common bile duct according to the above indications, will decrease the morbidity and mortality and restore most patients to economic efficiency and comfort.

GENERAL MEETING—MEMORIAL SERVICES

Wednesday, May 14

5:15 p. m. to 6:15 p. m.

Crystal Ballroom, Fourteenth Floor, Hotel Texas

B. L. JENKINS, M. D., Clarendon, Chairman, Committee on Memorial Exercises, Presiding.

The musical numbers of the program are presented by a string ensemble with the following instrumentation: Brooks Morris, first violin; S. P. Ziegler, cello; Sam Dunbar, second violin; Sam Jagoda, M. D., viola, with Guy Pitner at the piano.

1. *Invocation.* REV. J. K. THOMPSON, Pastor, First Presbyterian Church, Fort Worth.
2. *Largo.* *Dvorak.* (From the New World Sympathy.)
3. *Roll Call of Deceased Members of Women's Auxiliary.*
4. *Memorial Address Woman's Auxiliary.* MRS. E. C. FERGUSON, Beaumont.
5. *Roll Call of Deceased Physicians.* HOLMAN TAYLOR, M. D., Secretary, State Medical Association, Fort Worth.
6. *Memorial Address for Physicians.* B. L. JENKINS, M. D., Clarendon.
7. *Meditation from Thais.* *Massonet.*
8. *Benediction.* REV. J. K. THOMPSON.

GENERAL MEETING

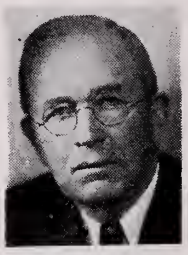
Thursday, May 15

9:30 a. m. to 11:45 a. m.

Crystal Ballroom, Fourteenth Floor, Hotel Texas

PRESTON HUNT, President, Presiding.

1. (9:30 a. m.) *The Present Status of Irradiation Treatment in Neoplastic Diseases.* (30 minutes).



GEORGE W. HOLMES, M. D.,
Boston, Mass.
(Guest of the Section on Radiology and Physiotherapy)
Clinical Professor of Roentgenology; Harvard Medical School and Roentgenologist, Massachusetts General Hospital.

This presentation will include a discussion of the various forms of irradiation now in general use, their proper selection and relative value in the treatment of neoplastic diseases, some observations on the relative value of surgical and radiological procedure, and an outline of the type of case suited to each method of treatment.

Those cases selected for treatment by irradiation are grouped and the general principles governing their management described. The local and general reactions of the patient to this form of treatment are discussed and the measure used to avoid or control them considered.

2. (10:00 a. m.) *Medical and Public Health Aspects of Trichinosis.* (30 minutes).

JAMES B. MCNAUGHT, M. D.,
San Francisco, Calif.
(Guest of the Section on Clinical Pathology)
Associate Professor of Pathology, Stanford University School of Medicine.

This is a general presentation of the subject of trichinosis covering briefly the historical background, the incidence of infection of man and hogs as revealed by recent surveys, the life history of the parasite Trichinella spiralis, symptomatology, diagnosis, pathology, therapy, prevention and control.

3. (10:30 a. m.) *Diagnosis and Treatment of Pancreatitis.* (30 minutes).

LAWRENCE S. FALLIS, M. D., F. A. C. S. Detroit, Mich.
(Guest of the Section on Surgery)
Surgeon-in-Charge, The Divisions of Surgery, Henry Ford Hospital, Detroit, Michigan.

Acute pancreatitis is a rare disease and infrequently diagnosed except at emergency operations on the acute abdomen, and at the postmortem table. In this paper etiology and pathology are only briefly referred to but diagnostic criteria are fully considered with special emphasis on clinical signs and the value of blood diastase estimations. The author cites the experience of the Henry Ford Hospital with both the immediate operative and the conservative methods of treatment. On the basis of this comparison of methods plus results obtained in other clinics a plea is made for adoption of the conservative or non-operative treatment of acute pancreatitis.

4. (11:00 a. m.) *Recent Advances in Public Health.* (30 minutes).

W. S. LEATHERS, M. D., LL. D., Nashville, Tenn.
(Guest of the Section on Public Health)
Dean and Professor of Preventive Medicine and Public Health, Vanderbilt University School of Medicine.

There is no phase of human effort which is causing greater change in the lives of people than the rapid advances in our knowledge of medical science. These achievements have been uniformly beneficial to mankind. They have not been secured by one nation at the expense of another. They are the result of the finest kind of coöperation, national and international. There has been remarkable progress in the technique of public health practice in recent years, and as a consequence there have been remarkable accomplishments in the control of disease and in the promotion of the public health. These dramatic advances will be, in some measure, outlined in this discussion.

COMBINED SECTIONS MEETING

Thursday, May 15

2:15 p. m. to 5:10 p. m.

Crystal Ballroom, Fourteenth Floor, Hotel Texas

PRESTON HUNT, President, Presiding.

1. (2:15) *The Use of Sulfanilamide Therapy in Pediatrics and Its Dangers.*
F. W. SCHLUTZ, Chicago, Ill.
2. (2:35) *Hyperemesis Gravidarum.*
E. D. PLASS, Iowa City, Iowa.
3. (2:55) *Exophthalmos.*
ALGERNON B. REESE, New York City.
4. (3:15) *The Management of Late Cases of Appendicitis.*
ROSCOE R. GRAHAM, Toronto, Canada.
5. (3:35) *The Roentgen Findings in Obstructing Lesions of the Bronchi.*
GEORGE HOLMES, Boston, Mass.
6. (3:55) *The Present Status of Coccidiodomycosis (Infection Caused by Coccidiodes imitis).*
JAMES B. MCNAUGHT, San Francisco, Calif.
7. (4:15) *Arterial Hypertension.*
RALPH H. MAJOR, Kansas City, Mo.
8. (4:35) *The Anxiety States—Etiology and Treatment.*
WILLIAM J. KERR, San Francisco, Calif.
9. (4:55) *When to Advise Operation in Acute Cholecystitis.*
LAWRENCE S. FALLIS, Detroit. Mich.

CLINICAL LUNCHEONS

MEDICINE AND PEDIATRICS

Wednesday, May 14

12:45 p. m. to 2:45 p. m.

Crystal Ballroom, Fourteenth Floor, Hotel Texas

W. L. HOWELL, Fort Worth, Chairman, Presiding.
E. M. WIER, Fort Worth, Co-chairman.

HONOR GUESTS

W. J. KERR, San Francisco, California, Professor of Medicine, University of California Medical School; Physician-in-Chief, University of California Hospital.

RALPH H. MAJOR, Kansas City, Missouri, Professor of Medicine, University of Kansas School of Medicine, Kansas City, Kansas.

JAMES B. MCNAUGHT, San Francisco, California, Associate Professor of Pathology, Stanford University School of Medicine, San Francisco, California.

F. W. SCHLUTZ, Chicago, Illinois, Professor of Pediatrics and Chairman of the Department of Pediatrics, The University of Chicago.

SURGERY, OBSTETRICS AND GYNECOLOGY

Wednesday, May 14

12:45 p. m. to 2:45 p. m.

The Den, Lower Level, Hotel Texas

R. J. WHITE, Fort Worth, Chairman, Presiding.
JERRELL BENNETT, Fort Worth, Co-chairman.

HONOR GUESTS

LAWRENCE S. FALLIS, Detroit, Michigan, Surgeon-in-Charge, The Divisions of Surgery, Henry Ford Hospital, Detroit, Michigan.

ROSCOE R. GRAHAM, Toronto, Canada, Assistant Professor of Surgery, University of Toronto; Senior Surgeon, Toronto General Hospital.

GEORGE W. HOLMES, Boston, Massachusetts, Clinical Professor of Roentgenology at Harvard Medical School and Roentgenologist, Massachusetts General Hospital, Boston, Massachusetts.

E. D. PLASS, Iowa City, Iowa, Professor and Head of the Department of Obstetrics and Gynecology, State University of Iowa.

EYE, EAR, NOSE AND THROAT

Wednesday, May 14

12:45 p. m. to 2:45 p. m.

Colonial Room, Lobby Floor, Hotel Texas

REX HOWARD, Fort Worth, Chairman, Presiding.

HONOR GUEST

ALGERNON B. REESE, New York City, Attending Surgeon, Institute of Ophthalmology; Ophthalmologist, Memorial Hospital for the Treatment of Cancer and Allied Diseases; Consulting Ophthalmologist, Roosevelt Hospital, New York City.

COMBINED SECTIONS

Thursday, May 15

12:15 p. m. to 2:15 p. m.

Crystal Ballroom, Fourteenth Floor, Hotel Texas

J. F. MCVEIGH, Fort Worth, Chairman, Presiding.
T. H. THOMASON, Fort Worth, Co-chairman.

HONOR GUESTS

LAWRENCE S. FALLIS, Detroit, Michigan, Surgeon-in-Charge, Divisions of Surgery, Henry Ford Hospital, Detroit, Michigan.

ROSCOE R. GRAHAM, Toronto, Canada, Assistant Professor of Surgery, University of Toronto; Senior Surgeon, Toronto General Hospital.

GEORGE W. HOLMES, Boston, Massachusetts, Clinical Professor of Roentgenology, Harvard Medical School and Roentgenologist, Massachusetts General Hospital, Boston, Massachusetts.

W. J. KERR, San Francisco, California, Professor of Medicine, University of California Medical School; Physician-in-Chief, University of California Hospital.

RALPH H. MAJOR, Kansas City, Missouri, Professor of Medicine, University of Kansas School of Medicine, Kansas City, Kansas.

JAMES B. MCNAUGHT, San Francisco, California, Associate Professor of Pathology, Stanford University School of Medicine, San Francisco, California.

E. D. PLASS, Iowa City, Iowa, Professor and Head of the Department of Obstetrics and Gynecology, State University of Iowa.

ALGERNON B. REESE, New York City, Attending Surgeon, Institute of Ophthalmology; Ophthalmologist, Memorial Hospital for the Treatment of Cancer and Allied Diseases.

F. W. SCHLUTZ, Chicago, Illinois, Professor of Pediatrics and Chairman of the Department of Pediatrics, The University of Chicago; Chief of Staff, Bobs Robert Memorial Hospital for Children, The University of Chicago.

SECTION ON MEDICINE

Tuesday, May 13

1:30 p. m. to 5:30 p. m.

Crystal Ballroom, Fourteenth Floor, Hotel Texas

Chairman—ORVILLE E. EGBERT, El Paso.

Secretary—T. G. GLASS, Marlin.

Guests of Section—WILLIAM J. KERR, San Francisco, California, and RALPH H. MAJOR, Kansas City, Missouri.

Guest Sponsors—J. F. MCVEIGH, Fort Worth (Dr. Kerr), and WILLIAM L. HOWELL, Fort Worth (Dr. Major).

Section Sponsors—J. MORRIS HORN and A. L. ROBERTS, Fort Worth.

1. *Chairman's Address: Sino-bronchial Disease, the Stepchild of Medicine.*
ORVILLE E. EGBERT, El Paso.

2. *Newer Conceptions of the Mechanism of Heart Failure.*
JOSEPH T. ROBERTS, Galveston.

Hypertrophy of the heart is presented as an evidence of heart failure. In hypertrophy, the capillaries fail to multiply as in normal growth. The capillary surface area per unit volume of muscle tissue becomes greatly lowered. Heart failure follows this vascular inefficiency, associated with depletion of phosphocreatine, myoglobin, oxygen and other substances related to the muscle metabolism. The thebesian veins may aid in overcoming heart failure during transitory emergencies. Correlated experiments with therapy are discussed.

Discussion to be opened by C. W. BARRIER, Fort Worth.

3. *Results in the Treatment of Various Cardiac Mechanism Disorders.*
GEORGE HERRMANN and GEORGE M. DECHERD, JR., Galveston.

Cardiac mechanism disorders are dramatic episodes, in some of which life hangs in the balance. Their recognition and management are matters of great clinical importance. We have restudied our experiences in these sudden or serious disorders of heart action with particular reference to the type of treatment that proves successful.

They may be divided into the tachycardias and the bradycardias or into the benign and the serious disorders, the frequent or rare.

Many of the disturbances are found in normal hearts; others are usually associated with organic heart disease.

Paroxysmal auricular tachycardia is one of the commoner benign disturbances. It often responds to carotid sinus pressure alone or other form of vagus stimulation. In more resistant cases mecholyl, quinidine, lanatosid C (I.V.) was rarely necessary.

The opposite type of heart rate that is vagotonic bradycardia with carotid sinus asystolic episodes, usually responded to atropine.

Among the more serious disorders, paroxysmal ventricular tachycardia, especially those following myocardial infarction, routinely were stopped by quinidine. Paroxysmal auricular flutter or fibrillation responded well to cinchonization or digitalization. In heart block cases with Adams-Stokes syndrome we have had moderate success with epenephrine, ephedrine or paredrine. Sometimes barium chloride seemed helpful. Digitalization was rarely successful.

Ventricular fibrillation was fortunately rarely encountered.

Discussion to be opened by D. D. WARREN, Waco.

4. *An Analysis of Five Hundred Cases of Organic Heart Disease. Etiological Types and Incidence.* GEORGE W. PARSONS, Texarkana.

A study of the types, and incidence of the several types, of organic heart diseases occurring in 500 adult, white, country and small-town residents is reported. Cases are classified into six etiological groups: hypertensive, arteriosclerotic, hypertensive-arteriosclerotic, rheumatic, syphilitic, and miscellaneous. It is noted that about 80 per cent of the cases belong to the hypertensive-arteriosclerotic groups, and that the syphilitic type is of very low incidence.

Discussion to be opened by ROBERT M. BARTON, Dallas.

5. *Clinical Experience with Coronary Thrombosis.* GHENT GRAVES, Houston.

Coronary thrombosis is an important and grave disorder. Certain clinical points in the recognition and treatment of this disease are not generally recognized. Early diagnosis is essential. Relief of pain or discomfort should be immediate. For this purpose, intravenous medication is the best. Many of the drugs employed are of questionable value. The tendency is to overmedicate these patients. Pulmonary embolism as a complication is often overlooked. The prognosis, which is always grave, may be improved by prompt recognition and proper treatment.

Discussion to be opened by H. M. WINANS, Dallas.

6. *Endocarditis Lenta.*

RALPH H. MAJOR, M. D., LL. D., Kansas City, Missouri.
Professor of Medicine, University of Kansas School of Medicine.

A summary of the advances in our knowledge of endocarditis lenta during the past thirty years. This disease, once looked upon as hopeless, now shows a lower mortality rate since the introduction of sulfonamide compounds. A brief discussion and the various results obtained in treating these patients with sulfonamide compounds. Immunological and chemotherapeutic aspects on this disease are discussed.

Discussion to be opened by W. J. KERR, San Francisco, Calif.

7. *Relapsing Fever.*
JAMES O. CHAMBERS, Fort Worth.

The etiology, incidence, pathological diagnosis, and treatment of relapsing fever is discussed. A report of six cases from Parker County is presented.

Discussion to be opened by K. H. BEALL, Fort Worth.

8. *Electro-shock Therapy* (Motion Picture).
A. HAUSER and L. BARBATO, Houston.

Introduction: Brief history of this form of treatment. Review of literature. Favorable results obtained with metrazol convulsive therapy as basis for use of electroshock. *Indications and Contra-Indications:* 1. Affective mental disorders such as manic depressive depressions, involutional melancholia, and other depressive mood states. 2. Select cases of schizophrenia, especially catatonic type. 3. Depersonalization reactions. *Complications:* Comparison of electroshock with metrazol therapy. *Technique:* Description of apparatus. The individual treatment—detailed description of patients' reactions—petit mal and grand mal. Number of treatments, frequency of treatments, and desirability of giving them in hospital environment. Can be given in home —precautions. *Case Reports:* To date. *Summary: Movie* (5 minutes) showing (1) the machine, details; (2) treatment technique; (3) a seizure; (4) patient before and after treatment.

Discussion to be opened by M. S. WHEELER, Rusk.

Wednesday, May 14

8:00 a. m. to 12 noon

Crystal Ballroom, Fourteenth Floor, Hotel Texas

9. *Snake Bite.* R. S. FILLMORE, Jacksboro.

Discussion to be opened by DUDLEY JACKSON, San Antonio.

SYMPOSIUM ON PNEUMONIA

10. *The Aims and Methods of Pneumonia Control.* JOE KOPECKY, San Antonio.

11. *The Modern Study of the Pneumonia Patient.* W. G. MADDOX, Dallas.

An estimation of the importance of pneumonia as compared with other diseases. The value of hospitalization of patients who present symptoms suggestive of pneumonia. A brief review of the symptoms and physical

findings that would suggest the presence of the disease; and, finally, a systematic and detailed outline of the recognized procedure for an actual diagnosis of pneumonia.

12. *Advances in the Treatment of Pneumonia.*
C. T. STONE, Galveston.

Discussion of symposium to be opened by W. G. REDDICK, Dallas.

13. *The Use of Radio-active Elements in Diagnosis and Treatment.*

W. J. KERR, M. D.,
San Francisco, Calif.

Professor of Medicine, University of California Medical School; Physician-in-Chief, University of California Hospital; Consulting Physician, San Francisco City and County Hospital.

In recent years practically all of the elements have been made radioactive by bombardment of their atoms by high voltage particles projected against them by the cyclotron. These elements now become tagged or prepared for identification and when combined in a molecule, may be used for the study of metabolic processes and may be used as radioactive agents for their location in different tissues of the body of animals, man or plants. Furthermore, these radioactive elements may be used as a means of radiating the local tissues in which they may lodge for a shorter or longer period. The discoveries which are being made through the use of these substances are revolutionary. Studies are being made in many phases of biology and medicine.

Discussion to be opened by RALPH H. MAJOR, Kansas City, Missouri.

14. *Air Embolism: Its Cause and Treatment.*
SHAW MCDANIEL, Houston.

The most common cause of air embolism today is pneumothorax treatment of tuberculosis. The air inadvertently is injected into the pulmonary vein and carried directly through the left ventricle with consequent obstruction of the coronary or cerebral arteries. Careful technique will frequently prevent this often fatal complication. The rapid absorption of carbon dioxide from the blood stream makes it ideal for initial treatments and complicated cases.

Discussion to be opened by ROBERT MOORE, Galveston.

15. *Panel Discussion of Brucellosis.*
   a. DEWITT NEIGHBORS, Fort Worth.
   b. F. T. MCINTIRE, San Angelo.
   c. LT. COL. F. H. K. REYNOLDS, San Antonio.

SECTION ON SURGERY

Tuesday, May 13

1:30 p. m. to 5:30 p. m.

Colonial Room, Lobby Floor, Hotel Texas

Chairman—LEE HUDSON, Dallas.

Secretary—A. C. SCOTT, JR., Temple.

Guests of the Section—LAWRENCE S. FALLIS, Detroit, Michigan, and ROSCOE R. GRAHAM, Toronto, Canada.

Guest Sponsors—JACK DALY, Fort Worth (Dr. Fallis) and R. J. WHITE, Fort Worth (Dr. Graham).

Section Sponsors—JACK DALY and HAROLD J. SHELLEY, Fort Worth.

1. (1:30) *The Electroencephalogram and Its Abnormalities in Certain Clinical Disorders.*
S. R. SNODGRASS, Galveston.

The historical development of knowledge concerning the electrical activity of the brain is briefly reviewed. The normal electrical activity is illustrated by electroencephalographic records. Electroencephalographic records from patients with convulsive disorders, with intracranial neoplasms, and after craniocerebral trauma are presented and the abnormalities present are discussed briefly.

Discussion to be opened by JAMES GREENWOOD, JR., Houston.

2. (2:00) *Indications for Partial Gastrectomy.*
W. E. CRUMP, Wichita Falls.

A brief review of the literature relative to gastric resection is given. The incidence of chronic gastric ulcer, chronic duodenal ulcer, and malignancy of the stomach is presented in summary form and the factors influencing the choice of a surgical procedure are discussed.

Case histories of a series of patients treated at the Wichita Falls Clinic Hospital are presented with x-ray demonstrations of lesions, and a discussion of operative findings and postoperative course.

Discussion to be opened by W. H. CADE, San Antonio.

3. (2:30) *Controlling Colostomies.*
TOM E. SMITH, Dallas.

Feeling that the main lay objection to a colostomy is the thought of a vent being made in the abdominal wall over which they will have no control as to the passage of feces and gas the author devised a "plug" which has proven its ability to control colostomies over a trial period of two years and is now making the first general report of this device.

This "plug" along with a simple method of colostomy care has proven of value to the author in quickly adjusting colostomy patients to normal status and in overcoming objections of prospective colostomy patients.

Discussion to be opened by HERBERT T. HAYES, Houston.

4. (3:00) *Multiple Stage Resection of the Colon.*

LAWRENCE S. FALLIS, M. D.,
F. A. C. S. Detroit, Mich.

Surgeon-in-Charge, the Division of General Surgery, Henry Ford Hospital, Detroit, Michigan.

The popularity of multiple stage resections of the colon is due to the low mortality rate. One stage operations on the right half of the colon may be indicated when the general condition of the patient is excellent, but one stage procedures on the left half of the colon are seldom justified. The types of multiple stage operations performed on the right colon, the left colon and the low sigmoid at the Henry Ford Hospital are described in this presentation. Discussion is entered into concerning preoperative preparations of patients for colon operations, anesthesia, support during operations and postoperative care.

5. (3:30) *Plastic Construction of an Artificial Vagina.* (Motion Picture.)
T. G. BLOCKER, Galveston

A case is reported of congenital absence of the vagina, and a Kodachrome movie is presented showing the details of the operative procedure for plastic construction with follow-up results one year after operation. A brief discussion of other methods with their advantages and disadvantages is also presented.

Discussion to be opened by J. T. KRUEGER, Lubbock.

6. (4:00) *Periureteral Abscess.*
MICHAEL K. O'HEERON, Houston.

Abscesses about the ureter have been classified with regard to their etiology. Instrumental injury to the ureter is more common than is usually supposed, and this is one common cause of periureteral abscess formation. Impacted ureteral calculi often produce periureteral suppuration. In all cases of abscess formation, surgical drainage is necessary. By proper management, the involved kidney can be saved in many instances. The literature has been reviewed, and four new cases have been added.

Discussion to be opened by FRANK S. SCHOONOVER, JR., Fort Worth.

7. (4:30) *The Treatment of Wounds.*
T. H. THOMASON, Fort Worth.

The history of the treatment of wounds is briefly outlined. Further discussion concerns itself with the treatment of lacerated and incised wounds, both traumatic and operative. Essential principles of wound-healing are reviewed. Antiseptics are considered with reference to their proper role in the treatment of fresh wounds. The matter of sutures and incisions are discussed. Brief mention is made of the influence of vitamin deficiency on wound-healing.

Discussion to be opened by ROBERT J. ROWE, JR., Kaufman.

8. (5:00) *Injuries of the Shoulder Joint with Particular Reference to Rupture of the Supraspinatus Muscle.*
LOUIS P. GOOD, Texarkana.

A discussion will be made of painful shoulder arising primarily from lesions of the supraspinatus tendon and of the subacromial bursa: (1) acute traumatic bursitis; (2) acute bursitis with calcification; (3) subacute bursitis with calcification; (4) chronic bursitis; and (5) obliterative bursitis.

It is proposed to outline the significant points in the history and examination of each lesion, to describe briefly the pathologic changes giving rise to the symptoms, to relate therapeutic measures which have been used successfully, and finally to report the prognosis based on the combined experience of authorities.

Fractures and dislocations will not be discussed.

Discussion to be opened by FRANK C. HODGES, Abilene.

Wednesday, May 14

8:00 a. m. to 12 noon

Colonial Room, Lobby Floor, Hotel Texas

9. (8:00) *Reduction of Recurrence Rates Following Hernia Repairs.*
HAROLD J. SHELLEY, Fort Worth.

Attention is called to the fact that the surgeon should have a complete knowledge of the normal anatomy of the region in which the hernia is to be repaired as well as the expected abnormal variations of that anatomy. Suggestions are advanced as to certain changes in technic and maneuvers which will reduce the expected recurrence rate following hernia repairs.

Discussion to be opened by R. WILSON CROSTHWAIT, Waco.

10. (8:30) *Differential Diagnosis of Internal Derangement of the Knee.*
W. A. BISHOP, JR., Wichita Falls.

The anatomy of the knee is reviewed briefly and a procedure for routine examination is outlined. Congenital malformations considered and traumatic and post traumatic conditions are discussed in detail. Treatment is briefly reviewed with particular emphasis on the early attention following severe injuries to the knee joint. The entire paper will be illustrated with lantern slides.

Discussion to be opened by HERBERT E. HIPPS, Marlin.

11. (9:00) *The Surgical Treatment of Ureteral Stone.* HARRY M. SPENCE, Dallas.

This paper analyzes the indications for operation encountered and illustrated in a personal series of ureterolithotomies. The surgical technic is discussed and the recent literature is briefly reviewed to emphasize the fact that surgery is by no means an outmoded type of treatment, but it is an eminently satisfactory method in properly selected cases.

It should be remembered that while cystoscopic removal of ureteral stones is unquestionably the method of choice in the majority of cases, the opinion of unbiased urologists is that open surgical removal still retains undisputed place as the safest and most logical procedure in a proportion varying from 10 to 30 per cent of the total number of cases seen. My experience is in accord with this viewpoint.

Discussion to be opened by J. MANNING VENABLE, San Antonio.

12. (9:30) *Management of Acute Cholecystitis.*
PAUL M. RAMEY, Temple.

The data taken from a series of approximately 100 case records of acute cholecystitis are presented. Only brief mention is made of the literature; the discussion, summary, and conclusion being based upon the above study with special mention of symptoms, operative findings, and the pathologic changes found. The time of operation and the type of operation, with an outline of the management which we follow, are briefly considered.

Discussion to be opened by J. D. BECTON, Greenville.

13. (10:00) *The Use of Enterostomy and Wangensteen's Suction.* BURT B. SMITH, Houston.

The indications for Wangensteen's suction apparatus are reviewed and it is pointed out that it has largely obviated the necessity for enterostomy instead of a complete operation in advanced cases of intestinal obstruction. Attention is called to the utilization of enterostomy in cases of bowel trauma, and to its use as a decompression operation in colon surgery. The technique is briefly described and cases are reported to illustrate indications. The important points are re-emphasized in the conclusions.

Discussion to be opened by MALONE V. HILL, Alpine.

14. (10:30) *Surgical Procedures for Duodenal Ulcers.*

ROSCOE R. GRAHAM, M. B., F. R. C. S. Toronto, Canada.
Assistant Professor of Surgery, University of Toronto, and Senior Surgeon, Toronto General Hospital.

The cause of duodenal ulcer is unknown. It is not a local disease, but a local manifestation of a constitutional state. Uncomplicated duodenal ulcer is not a surgical disease. Surgery is indicated for complications of acute perforation, recurring hemorrhage, penetration into adjacent organs, and scar stenosis.

All operative procedures should aim to correct the biochemical faults of disturbed motion and secretion. These disturbances are not constant, but are dependent upon the character, site extent and age of the local lesion, as well as the age of the patient. Therefore the surgical procedure applicable to a given case is only determined by a complete study of all these factors in the individual patient. These surgical procedures, intelligently applied and carefully performed, offer restoration to economic efficiency and comfort to such patients.

15. (11:00) *Pulmonary Lobectomy and Pneumonectomy for Suppurative and Malignant Diseases of the Lungs.* ROBERT SHAW, Dallas.

Pulmonary lobectomy and pneumonectomy have become established procedures in the treatment of many suppurative and malignant diseases of the lung. Bronchiectasis, multiple abscesses, tuberculosis, cystic disease, and lipoid pneumonia are the principal suppurative conditions in which these procedures are indicated. Primary bronchial neoplasms and occasionally metastatic tumors can be successfully removed in certain cases. The author's series of fifteen lobectomies and four total pneumonectomies are reported to illustrate the indications for these procedures.

Discussion to be opened by FELIX P. MILLER, El Paso.

16. (11:30) *Common Neurosurgical Operations for Relief of Pain.* R. C. L. ROBERTSON, Houston.

The problem of intractable pain due to malignancies and neuralgias or to conditions of unknown etiology are usually amenable to neurological surgery. Complete rehabilitation of the patient is difficult when opiates are used to relieve pain, whereas physiological operations upon the nervous system may restore the patient to a high functional level. This paper discusses briefly those conditions for which neurosurgical procedures have been devised to relieve pain, including those upon the autonomic nervous system.

Discussion to be opened by CHARLES M. SIMPSON, Temple.

SECTION ON OBSTETRICS AND GYNECOLOGY

Tuesday, May 13

1:30 p. m. to 5:30 p. m.

Longhorn Room, Mezzanine Floor, Hotel Texas

Chairman—ROY L. GROGAN, Fort Worth.
Secretary—DAVID S. HAMMOND, Paris.
Guest of the Section—E. D. PLASS, Iowa City, Iowa.
Guest Sponsor—CAREY HIETT, Fort Worth.
Section Sponsors—THERON H. FUNK and A. B. PUMPHREY, Fort Worth.

1. *Chairman's Address: The Influence of Antenatal Factors Upon Obstetrical and Gynecological Conditions.*
ROY L. GROGAN, Fort Worth.

2. *Pregnancy and Diabetes.*
J. ALSTON CLAPP, JR., Houston.

Pregnancy complicated by diabetes mellitus is one of the enigmata of an obstetrical practice. The essayist emphasizes the therapeutic aspect of this problem with particular reference to the antenatal care, as well as the management of the patient at the time of confinement. The discussion also summarizes the recent progress attained in the treatment of gravid diabetics with complications incidental to pregnancy.

Discussion to be opened by ALLEN T. STEWART, Lubbock.

3. *Are We Lowering the Mortality Rate of Mother and Child by "Streamlining" Our Obstetrics?* W. B. REEVES, Greenville.

1. By "streamlining," is meant the speeding up and modernizing our deliveries.

2. Prenatal care should be scientific and combined with good common sense.

3. Labor should not be started routinely.

4. Every woman in labor should have constant supervision of a competent physician, regardless of time required.

5. How to avoid haste, and thereby avoid a high mortality rate to mother and child.

Discussion to be opened by WAYNE T. ROBINSON, Dallas.

4. *Hookworm Disease Complicating Pregnancy.* ROBERT A. JOHNSTON and GEORGE F. ADAM, Houston.

The literature on this subject has been adequately reviewed and several interesting cases are presented. The relationship between severe toxemias of pregnancy and severe hookworm infection is especially discussed. Treatment of hookworm disease complicating pregnancy is also included.

Discussion to be opened by B. H. PASSMORE, San Antonio, and A. A. NEWSOME, Dallas.

5. *The Treatment of Puerperal Infection.* (30 minutes.)

E. D. PLASS, M. D.,
Iowa City, Iowa.
Professor and Head of the Department of Obstetrics and Gynecology, State University of Iowa.

Puerperal pyrexia should be attributed to infection of the pelvic organs unless an extrapelvic source of the fever can be adequately demonstrated. Such explanations as breast engorgement, constipation, and nervous excitement should not be accepted.

Puerperal infection ordinarily begins in the uterus where it is commonly "silent," except for fever and tachycardia. The appearance of other symptoms or signs usually means extension beyond the uterus.

The most common infecting agent in serious puerperal infections is the aerobic or anaerobic beta-hemolytic streptococcus. In the early stages of the disease there is little or nothing to indicate clinically the presence of these organisms; the diagnosis can be made only by culture. Material obtained from the upper vagina and cervix may not be so valuable as that withdrawn from the uterus, but is more easily secured and gives useful information.

Except in the presence of this or of one of the rarer infecting agents, general supportive treatment alone is required—ergot, ice-caps, forced fluids, and positional drainage may be valuable, and the relief of anemia by transfusions hastens convalescence.

Demonstration of the beta-hemolytic streptococcus demands more energetic treatment. Chemotherapy with one of the sulfonamides, and repeated blood transfusions are indicated. It is difficult to evaluate the newer drugs but the early enthusiasm for their use has not been completely justified.

Discussion to be opened by J. W. BOURLAND, SR., Dallas.

6. *Analgesia in Obstetrics: An Analysis of 500 Consecutive Deliveries.* LAWRENCE E. ARNOLD, Dallas.

A survey of the literature reveals that most of the papers on obstetric analgesia attempt to prove the efficacy of some particular drug.

In this paper six different analgesic drugs or combinations of drugs have been studied with complete impartiality. Both the analgesic effect upon the mother and the narcotizing effect upon the baby have been carefully analyzed and graded.

Discussion to be opened by JAMES N. MCLEOD, Dallas.

7. *Uterine Inertia.* CHARLES ADNA SMITH, Texarkana.

Theories of the cause of labor pains are discussed. Uterine inertia may be primary or secondary. The etiology of primary uterine inertia is discussed. Inertia may occur at the end of gestation, or during the first, second or third stage of labor or during all three stages. Treatment is discussed, with conservatism as the keynote in cases of primary inertia.

Discussion to be opened by D. D. WALL, San Angelo.

8. *Uterine Bleeding Complicating Pregnancy—Its Significance as Shown in One Hundred Consecutive Cases.* T. F. BUNKLEY, Temple.

This paper is a consideration of 100 consecutive cases of bleeding complicating pregnancy. The stage of pregnancy, amount of flow, association with or without pain, the character of the flow and duration are all considered.

In the discussion the significance of the bleeding as far as the pregnancy is concerned is discussed specifically, and the paper concludes with a consideration of the diagnosis, treatment, and final results.

Discussion to be opened by J. E. KANATSER, Wichita Falls.

9. *Ephedrine Sulphate Intranasally as a Cause of Uterine Bleeding.* EVELYN GASS POWERS, Amarillo.

Ephedrine sulphate is used extensively in nasal drops and sprays for the treatment of sinus infections and hay fever. Many such sufferers become almost addicted to the drug. Since its use has been found to cause uterine bleeding in certain cases, it should be considered in the diagnosis of meno-metrorrhagia. No permanent harm has been observed from its use.

Wednesday, May 14

8:00 a. m. to 12 noon

Longhorn Room, Mezzanine Floor, Hotel Texas

10. *A Consideration of Urological Conditions in Gynecology.* HOWARD O. SMITH, Marlin.

A discussion with presentation of case reports of various urologic anomalies and conditions which obscure the diagnosis in gynecologic patients.

Anomalous ureters, ectopic kidney, congenital obstruction, ureterocele, calculus obstruction with hydronephrosis—all may simulate pelvic pathology.

Unless these are kept in mind, unnecessary pelvic operations may be performed.

Discussion to be opened by MINNIE MAFFETT, Dallas, and E. W. BERTNER, Houston.

11. *Delay in Labor Due to Mild Degrees of Bandl's Ring.* HERMAN JOHNSON, Houston.

Brief of review of the embryology, anatomy, and physiology of the uterus and cervix.

Suggestion of a new physiological factor.

Diagnosis of Bandl's ring; importance of early detection of varying degrees; diagnosis of constriction ring.

Treatment with its numerous possibilities.

Brief review of fetal and maternal mortalities in foregoing conditions.

Discussion to be opened by FOSTER MOORE, San Antonio.

12. *Contracted Pelvis and Delayed Labor* (30 minutes). E. D. PLASS, Iowa City, Iowa.

Pelvic contraction of clinical significance is becoming increasingly uncommon. Clinical mensuration of the pelvis, especially of the diagonal conjugate and the bisischial diameter, is relatively simple and adequate for most practical purposes. X-ray pelvimetry is an expensive luxury. In any case, the essential necessity is to determine the relative size of the pelvis and the fetal head. The treatment of pelvic contraction involves elective cesarean section, a test of labor, or trial labor, which latter terms are discussed.

Delayed labor is due only rarely to contracted pelvis but is commonly a manifestation of uterine inertia. "Rigid cervix" is an extremely rare obstetric complication. "Exhaustion fever" is usually due to dehydration. "Dry labor" does not in itself prolong the birth process. The occiput posterior position is not a serious complication of labor if it is recognized and handled conservatively. The use of oxytocics to whip up the uterus is dangerous to mother and child. Sedatives and patience are the better remedies in delayed labor, even though operative intervention is occasionally necessary.

Discussion to be opened by C. T. COLLINS, Waco.

13. *The Problem of Sterility.*
LEE J. GLOBER, San Antonio.

It is essential to consider sterility as a problem of sterile mating. The assay of male fertility depends chiefly on the differential count of abnormal and normal forms of spermatozoa.

The investigation of the female must be thorough. The diagnosis depends on pelvic findings, constitutional findings, and complete studies of possible mechanical obstruction and endocrine dysfunction. The prophylactic and active treatment of abortion is considered along with the problem of sterility.

Discussion to be opened by M. A. DAVISON, Marlin.

14. *The Management of Sterility in the Female.*
RIDINGS E. LEE, Dallas.

This paper consists of a general discussion of sterility in the female, including the physiology of the female reproductive system; causes of sterility in the female; the diagnosis of sterility with special reference to antagonistic secretions, the endocrine patient, and the treatment of sterility.

Discussion to be opened by MAURICE J. MEYNIER, JR., Houston.

15. *Congenital Atresia of the Cervix.*
M. W. SHERWOOD, Temple,

This type of gynatresia is briefly defined and described. The literature of cases similar to the author's is surveyed. A case report is given in detail. The operative procedure performed is fully described and its successive steps are illustrated by lantern slides. A brief follow-up of the patient concludes the essay.

Discussion to be opened by WILLARD COOKE, Galveston.

16. *Postpartum Psychosis.* GILES DAY, Fort Worth.

1. Postpartum psychoses are viewed from the standpoint of the "vulnerable period" in regard to incidence, and constancy in regard to principal symptoms.
2. Classification is discussed in connection with the Standard Classified Nomenclature of Diseases and with the classifications used in standard textbooks.
3. Treatment is recommended based on the above classification and the more advanced methods of modern psychiatric treatment.

Discussion to be opened by HERBERT BEAVERS, Fort Worth, and GUY F. WITT, Dallas.

17. *Hypertrophic Pyloric Stenosis in Infants: Result of Birth Injury.* J. G. FLYNN, Houston.

Search of literature for accepted theories. Presenting analysis and study of ninety-nine cases in Houston hospitals in four years with record of their delivery.

Symptomatology; pathology, gross and microscopic; treatment, medical and surgical. Description of nerve supply and outline of theory that condition is result of injury at birth to parasympathetic nerve. Summary.

Discussion to be opened by HERMAN JOHNSON, Houston.

SECTION ON EYE, EAR, NOSE AND THROAT

Tuesday, May 13

1:30 p. m. to 5:30 p. m.

Alamo Room, Mezzanine Floor, Hotel Texas

Chairman—E. L. GOAR, Houston.

Secretary—A. W. ROBERTS, Texarkana.

Guest of Section—ALGERNON B. REESE, New York City.

Guest Sponsor—GATLIN MITCHELL, Fort Worth.

Section Sponsors—J. ESCHENBRENNER and GATLIN MITCHELL, Fort Worth.

1. *The Use of the Middle Meatus for Antrum Lavage.* J. CHARLES DICKSON, Houston.

Use of the middle meatus for antrum lavage. The paper will consist of a brief review of the literature. Then a discussion will be made of the anatomical factors involved with a report on dissection of twenty half heads. An analysis will be made of 281 consecutive cases where antrums were washed through either the middle meatus or the inferior meatus and a comparison drawn between the two methods. A few case reports will be given. Finally, the advantages and disadvantages of the method will be discussed. Lantern slides will illustrate various points brought out in the paper.

Discussion to be opened by F. B. MALONE, Lubbock, and J. L. BURGESS, Waco.

2. *Acute Catarrhal Mastoiditis.*
CLAUDE C. CODY, Houston.

Discussion to be opened by H. L. WARWICK, Fort Worth, and J. D. SINGLETON, Dallas.

3. *Benign and Mixed Tumors of the Pharyngomaxillary Space and Related Area: Report of Two Cases.*
W. BURBANK WOODSON, Temple.

A brief discussion of the pharyngomaxillary fossa and its related area. A case report of a benign mixed tumor removed from this cavity by blunt dissection, with slides and drawings illustrating the area, will be presented.

Discussion to be opened by W. R. THOMPSON, Fort Worth, and L. R. TESTER, San Angelo.

4. *Postnasal Fibroma.* F. P. SCHUSTER and S. A. SCHUSTER, El Paso.

Postnasal fibromas of the juvenile type are rare tumors of unknown etiology but probably associated with an endocrine sex imbalance. They must be treated to prevent destruction of surrounding tissue, control hemorrhage and restore function. Radiation will often control this tumor but where large and invading surrounding structures, surgery is often required. The latter is more easily accomplished after radiation has cut down the vascularity. Two cases are reported.

Discussion to be opened by D. A. RUSSELL, San Antonio, and C. F. FOWLER, Galveston.

5. *Some Remarks on Medical and Surgical Treatment of Sinusitis.*
E. F. STROUD, Corpus Christi.

1. Classification of Sinusitis:
   A. Allergic sinusitis.
      (1) Without infection.
      (2) With infectious process superimposed.
   B. Acute congestive sinusitis.
      (1) With first empyema.
      (2) Without empyema.
   C. Chronic hyperplastic sinusitis.
      (1) Simple hyperplastic.
      (2) With osteomyelitis, especially of the frontals.
      (3) With acute exacerbation.
   D. Malignancy of sinuses, especially maxillaries.
2. Differential Diagnosis Between Various Types.
3. Treatment—Medical and Surgical.

Discussion to be opened by T. C. STRICKLAND, Greenville, and C. B. WILLIAMS, Mineral Wells.

6. *The Radical Mastoidectomy, Indications, Technique and Postoperative Management.*
J. D. SINGLETON, Dallas.

Discussion to be opened by W. D. JONES, Dallas, and A. J. STREIT, Amarillo.

7. *Stenosis of the Nasolacrimal Duct.*
J. D. WALKER, Houston.

Stenosis of the nasolacrimal duct in the new-born is discussed, emphasizing the influence of inadequate prenatal care, endocrine and vitamin deficiency upon incomplete embryological development, this being cited as the principal etiological factor. Dacryocystitis as a complication in both infants and adults is stressed. Palliative treatment is discussed and surgical corrective procedures are illustrated. Case reports are included.

Discussion to be opened by RAY K. DAILY, Houston, and J. T. ROBISON, Austin.

Wednesday, May 14

8:00 a. m. to 12 noon

Alamo Room, Mezzanine Floor, Hotel Texas

8. *Cataract Surgery.* (Motion Picture).
WILLIAM S. WEBB, Fort Worth.

Discussion to be opened by S. N. KEY, Austin, and B. M. SHELTON, Brownwood.

9. *Safeguards in Cataract Surgery.*
F. H. NEWTON, Dallas.

1. Preparation of patient.
   a. General.
   b. Local.
2. Choice of operative procedure.
3. Position of patient.
4. Care in operative detail.
5. Postoperative attention.

Discussion to be opened by O. E. EGDORF, Wichita Falls, and T. E. FULLER, Texarkana.

10. *Applied Anatomy of the Eye with Particular Regard to the Surgical Aspects.*

ALGERNON B. REESE, M. D., New York City.

Attending Surgeon, Institute of Ophthalmology, New York City; Ophthalmologist Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York City; Consulting Ophthalmologist, Roosevelt Hospital, New York City.

Various anatomical structures of the eye which have a clinical significance will be discussed. The practical applications will be emphasized.

11. *Melanosarcomata of the Lid Margin and Conjunctiva: Report of Two Cases.*
J. T. STOUGH, Houston.

With more intensive studies of melanomata in and around the eye it is of interest to report two cases involving the conjunctiva, one of which started on the lid margin. The first case is that of a Negro woman, whose eye, with involved bulbar conjunctiva, was removed. Microscopic study revealed a melanoma of epithelioid and spindle cell type B melanoma and 50 per cent argyrophil fibers. The patient is still living after four years.

The second case is that of a white woman, who had a pigmented mole on the lid margin, which was injured. It then began to grow and eventually involved the bulbar conjunctiva. Even though considerable time had elapsed since onset of degenerative changes, exenteration of the orbit was indicated and done. This was followed by local recurrence in the lacrymal sac, in the nose and to the preauricular gland. In spite of further local measures the course was constantly downhill.

Discussion to be opened by E. W. GRIFFEY, Houston, and L. C. HEARE, Port Arthur.

12. *Hemorrhages into the Anterior Chamber.*
H. L. HILGARTNER and ALFRED PFITSH, Austin.

Hemorrhages into the anterior chamber are due to:
1. Trauma (non-perforating injury).
2. Surgery and perforating trauma.
3. Toxin (spontaneous).

A survey of the literature reveals that very little has been written on this subject. During recent years a great deal of work has been done on the drainage of the anterior chamber. The absorption of hemorrhages is related to the normal drainage system. A number of case reports are given, illustrating the various types, with a discussion of the treatment.

Discussion to be opened by V. R. HURST, Longview, and R. H. ROSEBROUGH, San Antonio.

13. *Reading Problems, Their Causes and Effects.*
L. H. QUINN, Dallas.

The causes of reading difficulties are multiple. They may be grouped under the headings of intellectual, emotional, educational, and physical. The effects of reading difficulties on the child are bewilderment, antagonism, nervousness, and other emotional reactions. Failures due to reading difficulties raise the cost of education.

Discussion to be opened by DAN BRANNIN, Dallas, and A. E. JACKSON, Fort Worth.

14. *Asthenopia Associated with Vitamin A Deficiency.* THOMAS J. VANZANT, Houston.

Discussion to be opened by J. J. RICHARDSON, Fort Worth, and J. W. WARD, Greenville.

SECTION ON RADIOLOGY AND PHYSIOTHERAPY

Tuesday, May 13

1:30 p. m. to 5:30 p. m.

Centennial No. 1, Mezzanine Floor, Hotel Texas

Chairman—C. F. CRAIN, Corpus Christi.

Secretary—WAYNE V. RAMSEY, Abilene.

Guest of Section—GEORGE W. HOLMES, Boston, Massachusetts.

Guest Sponsor—EUGENE V. POWELL, Fort Worth.

Section Sponsors—R. P. O'BANNON and EUGENE V. POWELL, Fort Worth.

(Those in attendance on the Section are urged to place written questions in the Question Box on the presiding officers' table early in each session. The questions will be answered by Dr. George W. Holmes, guest speaker of the Section.)

1. *Chairman's Address.*
C. F. CRAIN, Corpus Christi.
2. *The Irritable Colon.* JOHN S. BAGWELL, Dallas.
Discussion to be opened by JEROME SMITH, San Angelo.
3. *The Relation Between the Radiologist and the Referring Doctor.* R. T. WILSON, Austin.
Discussion to be opened by R. P. O'BANNON, Fort Worth.
4. *X-ray Findings of the Bones in Certain Nutritional Disorders.*
JESSE B. JOHNSON, Galveston.
Discussion to be opened by B. T. VANZANDT, Houston.
5. *The Roentgen Examination as a Diagnostic Procedure in Hemorrhage from the Gastrointinal Tract.*

GEORGE W. HOLMES M. D., Boston, Mass.

Clinical Professor of Roentgenology; Harvard Medical School and Roentgenologist, Massachusetts General Hospital.

The object of this paper is to emphasize the value of modern methods in gastro-intestinal examinations and to point out some of the causes of hemorrhage from the gastro-intestinal tract which may be easily overlooked unless carefully searched for. The presentation is largely in the form of case reports, and lantern slide demonstration.

In conclusion the lesson to be drawn from the material presented will be pointed out.

6. *A New Radiation Technic for the Treatment of Metastatic Lymph Nodes.*
CHARLES L. MARTIN, Dallas.
Discussion to be opened by GEORGE W. HOLMES, Boston.
7. *Radiation Therapy in Pelvic Conditions.*
JOHN H. VAUGHN, Amarillo.
Discussion to be opened by E. V. POWELL, Fort Worth.

Wednesday, May 14

8:00 a. m. to 12 noon

Centennial No. 1, Mezzanine Floor, Hotel Texas

8. *Resume of New Equipment and Technique.*
ASA SEEDS, Dallas.
Discussion to be opened by R. E. BARR, Beaumont.
9. SYMPOSIUM ON THE USE OF CONTRAST MEDIA
   a. *Sinuses.* G. F. THORNHILL, Austin.
   Discussion to be opened by R. G. GILES, San Antonio.
   b. *Chest.* HENRY HOSKINS, San Antonio.
   Discussion to be opened by H. F. CARMAN, Dallas.
   c. *Kidney and Bladder.*
   STEWART COOPER, Abilene.
   Discussion to be opened by FRANK SCHOONOVER, Fort Worth.
   d. *Uterus and Tubes.*
   WAYNE V. RAMSEY, Abilene.
   Discussion to be opened by C. A. WILCOX, Wichita Falls.

e. *Encephalograms.*
JAMES GREENWOOD, Houston.
Discussion to be opened by A. P. D'ERRICO, Dallas.

10. *Intra-oral Radiation.* PALMER WIGBY, Dallas.
Discussion to be opened by J. W. CATHCART, El Paso.

11. *Answers to Written Questions Placed in Question Box.* GEORGE W. HOLMES, Boston, Mass.

12. *Review of Interesting Films and Films for Diagnosis.*

SECTION ON PUBLIC HEALTH

Tuesday, May 13

1:30 p. m. to 5:30 p. m.

French Room, Fourth Floor, Blackstone Hotel

Chairman—B. E. PICKETT, Carrizo Springs.

Secretary—J. M. COLEMAN, Austin.

Guest of the Section—W. S. LEATHERS, Nashville, Tennessee.

Guest Sponsor—HAROLD M. WILLIAMS, Fort Worth.

Section Sponsors—W. B. NIES and HAROLD M. WILLIAMS, Fort Worth.

1. *Mental Health, Its Relation to Child Growth and Development.* TITUS HARRIS, Galveston.

The main sources of emotional problems will be discussed, and an attempt will be made to show how worries, tension, feelings of insecurity, and conflicts of all kinds not only influence physical functions, but also direct the course of personality development. Suggestions for corrective measures and handling will be offered.

Discussion to be opened by THOMAS M. DORBANDT, San Antonio.

2. *Society's Responsibility for Protecting the Mental Health of Children.*
ROBERT L. SUTHERLAND, Director,
Hogg Foundation, University of Texas.

3. *Newer Knowledge of Pneumonia.*
H. M. WINANS, Dallas.
Discussion to be opened by CHARLES D. REECE, Houston.

4. *Legal Principles in Public Health Administration.* JUDGE RALPH YARBOROUGH, Austin.

A discussion of certain legal principles relating to public health and to the physician, based upon the laws of the State of Texas. Special vexing problems which arise for physician and health officer will be dealt with.

Discussion to be opened by E. W. PROTHRO, Corpus Christi.

5. *The Well Child Conference, Service and Administration.* HAROLD WOOD, Austin.

The Well Child Conference will be described, and an attempt will be made to evaluate the services rendered in the conference. Special problems of administration of conferences will be pointed out with suggestions for handling.

Discussion to be opened by EDITH BONNET, San Antonio.

6. *Racial Factors in Infant Mortality.*
A. M. DASHIELL, Austin.

An analysis is made of infant deaths, tuberculosis, and deaths from diarrhea and enteritis with regard to racial and geographic distribution. The particular problems of the Latin-American group are pointed out and stressed.

Discussion to be opened by H. H. PUCKETT, Alice.

Wednesday, May 14

8:00 a. m. to 12 noon

French Room, Fourth Floor, Blackstone Hotel

7. *Administrative Problems in Texas Public Health Program.* GEORGE W. COX, Austin.

8. *Qualifications of Professional Public Health Personnel and Their Significance in the Advancement of Public Health.*

W. S. LEATHERS, M. D., LL. D.,
Nashville, Tenn.

Dean, and Professor of Preventive Medicine and Public Health, Vanderbilt University School of Medicine.

Encouraging progress has been made in recent years in preparing qualified professional personnel for public health work. Important trends have been developed during the past two decades. These are proving of fundamental importance in the advancement of the public health program, federal, state and local. A resume of our present status in this undertaking will be given. Some of the factors involved will be discussed. The outlook in the preparation of public health personnel will be visualized.

9. *A New Approach to Tuberculosis Control.*
J. EDWARD JOHNSON, Mineral Wells.

A simple technique of concentrating tuberculosis bacilli for purposes of staining is described. The tuberculosis clinic in Mineral Wells is discussed, and certain interesting forms of recording and following cases are presented.

Discussion to be opened by H. E. SMITH, Austin.

10. *Some Considerations in Control of Brucellosis.*
LUTHER L. TERRY, Galveston.

Brief historical discussion of brucellosis in Texas, a description of the species, the modes of transmission, the methods of control, and suggestions for revision of old methods are given. The manner of introduction of new methods of control is emphasized.

Discussion to be opened by W. W. BONDURANT, JR., San Antonio.

11. *Reactions to Arsenic Therapy.*
A. C. KING, San Antonio.

A discussion of the types and number of reactions to arsenic therapy with the comparison of the toxicity of neoarsphenamine and mapharsen is presented, based upon over 21,000 treatments in the San Antonio Venereal Disease Clinic.

Discussion to be opened by ARTHUR G. SCHOCH, Dallas.

12. *The Public Health Approach to the Control of Diarrhea and Enteritis in Infants.*
L. T. COX, El Paso.
Discussion to be opened by GRADY DEATON, San Benito.

SECTION ON CLINICAL PATHOLOGY

Tuesday, May 13

1:30 p. m. to 5:30 p. m.

Centennial No. 2, Mezzanine Floor, Hotel Texas

Chairman—MEYER BODANSKY, Galveston.

Secretary—SIM HULSEY, Fort Worth.

Guest of the Section—JAMES B. MCNAUGHT, San Francisco, California.

Guest Sponsor—T. C. TERRELL, Fort Worth.

Section Sponsors—ROBERT J. JERMSTAD and MAY OWEN, Fort Worth.

1. *A Correlation Between Clinical Picture and Pathological Findings in a Series of Leukemias and Lymphosarcomata.*
L. L. GRIFFIN and
PAUL BRINDLEY, Galveston.

This paper is the report of a study of the cases of leukemias and lymphosarcomata encountered in a series of 5,300 necropsies. The cases are classified under generally acceptable groupings, and an attempt is made to correlate the clinical picture with the pathological findings.

Discussion to be opened by W. N. POWELL, Temple.

2. *Banti's Syndrome.* T. P. CHURCHILL, Amarillo.
Discussion to be opened by A. B. CAIRNS, Dallas.

3. *Blood Findings in Acute Appendicitis.*
L. O. DUTTON, El Paso.

In routine practice a great many patients presenting a clinical syndrome of acute appendicitis have blood findings which do not conform to certain specific requirements that may be considered as diagnostic of the infection. In an effort to explain this discrepancy, 125 cases of appendicitis were studied with a view to correlating the blood findings with the pathological findings, and also with the clinical diagnosis. These data are presented in tabular form, and a critical analysis is made of the diagnostic significance of certain changes in the blood, concerning the total leukocyte count, polynuclear percentage, the immature forms percentage, and the eosinophile percentage.

Discussion to be opened by D. G. HENDERSON, Houston.

4. *Metastatic Brain Tumors.*
HENRY HARTMAN and LEWIS M. HELFER, San Antonio.

Discussion to be opened by CHARLES PHILLIPS, Temple.

5. *A Consideration of Hemangioma.*
JOHN L. GOFORTH, Dallas.

Discussion to be opened by MAY OWEN, Fort Worth.

6. *The Problem of Sterility and Reduced Sterility. Clinical Laboratory Aspects.*
D. A. TODD, San Antonio.

This paper will develop laboratory diagnostic aid in the study of male sterility and will bring out particularly the importance of morphologic study of the cytological elements of the seminal fluid and the interpretation of findings for correlation with the clinician's opinion.

Discussion to be opened by J. L. JINKINS, Galveston.

7. *A Critical Study of the Laboratory Methods of Diagnosis of Gonorrhea in Women.*
C. E. LANKFORD, Galveston.

An analysis of the smear and cultural methods of diagnosis of gonorrhea, with special reference to their relative efficiency and to those factors influencing the results obtained by each method.

Discussion to be opened by SEAB J. LEWIS, Beaumont.

8. *Early Degenerative Lesions of the Pancreas.*
STUART A. WALLACE and CHARLES T. ASHWORTH, Dallas.

The causes of pancreatic degenerative lesions are briefly reviewed. A summary is made of autopsy material and an evaluation of arteriosclerosis, metaplasia and duct obstruction and their relation to adipose tissue invasion, atrophy, fibrosis and necrosis is presented. Arteriosclerosis is found to be the most constant lesion associated with such degenerative changes.

Discussion to be opened by JOHN J. ANDUJAR, Fort Worth.

Wednesday, May 14
8:00 a. m. to 12 noon
Centennial No. 2, Mezzanine Floor, Hotel Texas

9. *Amebiasis Cutis.* ROBERT J. JERMSTAD and GEORGE V. LAUNEY, Fort Worth.

Discussion to be opened by ROBERT G. BAKER, Fort Worth.

10. *Chairman's Address: The Variability of Laboratory Data and the Role of the Clinical Pathologist.* MEYER BODANSKY, Galveston.

11. *The Diagnosis of Trichinosis.*

JAMES B. MCNAUGHT, M. D.,
San Francisco, Calif.

Associate Professor of Pathology, Stanford University School of Medicine, San Francisco, California.

This paper presents in detail the methods available for the laboratory diagnosis of trichinosis. It includes methods for examining suspected meats, biopsy, stool, blood and cerebrospinal fluid examinations, intradermal tests and precipitin and flocculation tests.

PANEL DISCUSSION ON LABORATORY METHODS AND CLINICAL INTERPRETATIONS*

Serology—S. W. BOHLS, Austin.
Allergy—J. H. BLACK, Dallas.
Allergy—ALBERT H. BRADEN, Houston.
General Pathology—GEORGE T. CALDWELL, Dallas.
Hematology—J. M. HILL, Dallas.
General Clinical Pathology—JOHN F. PILCHER, Corpus Christi.
Clinical Mycology—LESLIE M. SMITH, El Paso.
Clinical Bacteriology—B. F. STOUT, San Antonio.
Laboratory Organization—T. C. TERRELL, Fort Worth.
Clinical Parasitology—L. L. TERRY, Galveston.

*All members of the section and members of other sections in attendance on this program are invited to submit questions and to participate in the panel discussions.
Discussion of specific questions by any one individual will be limited to five minutes.

SECTION ON PEDIATRICS

Tuesday, May 13
1:30 p. m. to 5:30 p. m.
Cactus Room, Fourteenth Floor, Hotel Texas

Chairman—HUGH LESLIE MOORE, Dallas.

Secretary—FRANK H. LANCASTER, Houston.

Guest of the Section—F. W. SCHLUTZ, Chicago, Illinois.

Guest Sponsor—L. O. GODLEY, Fort Worth.

Section Sponsors—C. O. TERRELL, JR., and C. S. E. TOUZEL, Fort Worth.

1. (1:30) *The Art of Treating Children.*
TALBOT A. TUMBLESON, Beaumont.

2. (1:45) *The Treatment of Acute Ileocolitis.*
DAVID GREER, Houston.

3. (2:00) *Facts and Fancies About Vitamin A and B Deficiencies.*

F. W. SCHLUTZ, M. D.,
Chicago, Ill.

Professor of Pediatrics and Chairman of the Department, The University of Chicago; Chief of Staff, Bobs Roberts Memorial Hospital for Children, The University of Chicago; Consultant, Children's Memorial Hospital, Chicago.

Discovery of the relationship between vitamin A and carotene marked the greatest progress in vitamin A investigation.

Vitamin A is an essential part of the biochemical machinery of all vertebrates.

All animals can convert certain carotenoids to vitamin A.

The requirement of the animal organism for vitamin A is very small, only a few mg. daily.

Most animals including man have remarkable capacity for storing vitamin A.

The liver cells are necessary for the conversion of carotene to vitamin A.

Chronic diseases, infections, and liver damage lead to deficiency of vitamin A.

Gross vitamin A deficiency is rare. Moderate edficiencies are not a clinical problem except in prolonged infections and wasting disease.

Exaggerated claims for vitamin A as the anti-infectious vitamin lack adequate proof.

Intimate and apparently indispensable connection with all forms of cell metabolism characterize the B complex as the key vitamin.

Significance of the various fractions to normal cell function is becoming increasingly apparent. Larger requirement, lesser stability and interdependence of the various fractions makes deficiencies of the B complex a real problem. Many disease processes now parading under other names are really B complex deficiencies.

Vitamin B[1] is less adequately supplied in the average American diet than any of the known vitamins.

B complex deficiencies of all degrees are widely prevalent.

Commercial exploitation of the B complex is boundless and filled with absurdities and exaggeration. This criticism does not hold for reputable pharmaceutical houses. They have contributed much to advance in this field.

B complex deficiency is a national problems.

4. (2:45) *Some Pediatric Therapeutic Suggestions.* H. LESLIE MOORE, Dallas.
5. (3:00) *An Appraisal of Pre-lacteal Feeding in Infants.* SIDNEY KALISKI, San Antonio.
6. (3:15) *Nasal Obstruction in Early Childhood.* RAMSEY H. MOORE, Dallas.
7. (3:30) *Diphtheria Immunizations.* EDWIN G. SCHWARZ, Fort Worth.
8. (3:45) *The Use of Sedatives in Children.* JOHN ASHBY, Dallas.
9. (4:00) *Milk and Appetite.* MAX R. WOODWARD, Sherman.
10. (4:15) *The Prevention and Treatment of Skin Diseases in Early Infancy.* LUCIUS D. HILL, JR., San Antonio.
11. (4:30) *Fluid Administration, When, Why, and How.* JOHN G. YOUNG, Dallas.
12. (4:45) *A Clinical Evaluation of the Use of Immune Globulin in Private Practice.* ALLAN BLOXSOM, Houston.

Wednesday, May 14

8:00 a. m. to 12 noon

Cactus Room, Fourteenth Floor, Hotel Texas

13. *City-County Hospital Care of Juvenile Diabetes.* JOHN DUNLAP, Dallas.

There are several reasons why a juvenile diabetic service should be organized, and a routine established in a large charity hospital. One is that, in a way, such a procedure advertises the care given and stimulates admissions sometimes badly needed by the patients. They are controlled more quickly and properly. The interne staff changes rather rapidly and with each change, new men with new ideas, or no ideas, on how to treat diabetes are in attendance on the service. With an established routine the ground work for more rapid investigation and treatment of the diabetic is assured. Another reason for the routine is that the patient or parents are better instructed in the care of the patient during his hospitalization. Also the follow up care after his hospital discharge is emphasized and insisted upon.

Our standing orders are divided into four headings: (1) General considerations; (2) diagnosis of juvenile diabetes; (3) routine for controlling the proven diabetic, and (4) routine care in emergencies.

Discussion to be opened by BOYD READING, Galveston.

14. *An Analysis of Public Health Problems in Texas.* J. M. COLEMAN, *Austin.*

Progress in reduction of infant mortality in Texas is shown together with a step by step analysis of the leading causes of death from birth through the fourteenth year. Special problems which appear when the public health viewpoint is applied to Texas children are mentioned and suggestions for improvement are offered.

Discussion to be opened by L. O. GODLEY, Fort Worth.

15. *Tuberculosis in Childhood.* J. P. GIBSON, Abilene.

The diagnosis of active pulmonary tuberculosis in children is difficult. By using the modern methods of repeated tuberculin testing, microscopic examination of stomach washings, and repeated chest roentgenograms, many cases will be discovered in their earlier stages when therapy is most effective.

Discussion to be opened by HARRY LEIGH, El Paso.

16. *Acute Laryngotracheobronchitis.* M. A. DAVISON, Marlin.

Acute laryngotracheobronchitis is probably more frequent than is recognized. The clinical picture is described and the differential diagnosis discussed, with particular attention to its similarity to laryngeal diphtheria. The methods of treatment are discussed.

Discussion to be opened by J. A. BYBEE, Beaumont.

17. *Hyperthyroidism.* A. W. PIERCE, Wichita Falls.

A discussion of hyperthyroidism in children, with special reference to those children who have not reached the age of puberty. The paper will include a case history, and discussion of etiological factors, symptomatology, diagnosis and treatment.

Discussion to be opened by F. A. GARBADE, Galveston.

18. *Treatment of Congenital Syphilis.* W. P. KILLINGSWORTH, Port Arthur.

This paper discusses the combined use of stovarsol and bismuth for the treatment of congenital syphilis. Conclusions are based on sixty cases thus treated and experience gained in other large pediatric hospitals using the same method. The author finds such treatment to be effective and safe, especially for infants and preschool children. Advantages and disadvantages are discussed fully.

Discussion to be opened by C. P. JASPERSON, Corpus Christi.

19. *The Practical Management of the Asthmatic Child.* RALPH BOWEN, Houston.

Signs of early recognition and the practical dietary approach; the various drugs used in treatment; handling of asthmatic children without an allergic survey; environmental factors and botanical offenders; infection as applied to allergy; high lights in the field of psychology as related to the asthmatic child; care of asthmatic children by physicians in general practice, with minimal technical evaluation, and varied phases of allergy through childhood to adolescence.

Discussion to be opened by G. T. O'BYRNE, Corpus Christi.

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*Ex-officio member from State Department of Health.
*Ex-officio member from State Department of Health.
*Ex-officio member from State Department of Health.
*Ex-officio member from State Department of Health.

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Texas Tuberculosis Association.—W. D. Anderson, San Angelo.

Texas Pharmaceutical Association. — Talbot A. Tumbleson, Beaumont.

Texas Public Health Association.—N. D. Buie, Marlin.

Texas State Hospital Association.—W. F. Starley, Galveston.

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Louisiana State Medical Society.—A. E. Greer, Houston.

New Mexico State Medical Society.—Richard Keys, Amarillo.

Oklahoma State Medical Association.—A. L. Ridings, Sherman.

Texas Safety Association, Inc.—A. F. Beverly, Austin.

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Technical Exhibits.—Charles H. McCollum, Jr., Chairman; L. D. Borough, Jack Furman, P. M. Nesbit, and Van D. Rathgeber.

Public Addresses.—John J. Andujar, Chairman; Wilmer Allison, I. P. Barrett, W. F. Ossenfort, and Sidney E. Stout.

Publicity.—H. O. Deaton, Chairman; Tom B. Bond, W. M. Crawford, Harold M. Williams, and J. R. Wise.

Halls and Lanterns.—E. E. Anthony, Chairman; Ted Lace, Eugene V. Powell, R. P. O'Bannon, and A. D. Roberts.

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Alumni Banquets.—W. C. Foster, Chairman; M. H. Crabb, J. H. Grammer, H. C. Thomas, and Valin R. Woodward.

Entertainment.—L. H. Reeves, Chairman; Porter Brown, Horace K. Kibbie, S. J. R. Murchison, and T. C. Terrell.

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Radiology and Physiotherapy.—R. P. O'Banon and Eugene V. Powell.
Public Health.—W. B. Nies and Harold M. Williams.
Pathology.—Robert J. Jermstad and May Owen.
Pediatrics.—C. O. Terrell, Jr., and C. S. E. Touzel.

*Ex-officio member from State Department of Health.
*Ex-officio member from State Department of Health.
*Ex-officio member from State Department of Health.

ANNOUNCEMENTS

All of the scientific activities of the annual session, with the exception of the Section on Public Health, will be housed in the Hotel Texas. The Section on Public Health will meet in the French Room, Fourth Floor of the Blackstone Hotel, two blocks north of the Hotel Texas, on the same side of Main Street.

The Registration Office will be located on the Mezzanine Floor of the Hotel Texas. Members, visitors and guests should register here immediately upon arrival in the city and obtain badges and programs.

The Information Bureau will be located adjacent to the Registration Office, on the Mezzanine Floor of the Hotel Texas. Tickets and information concerning the clinical luncheons will be available here. Address telegrams, telephone calls, and mail to the Information Bureau, State Medical Association, Hotel Texas, during the period of the annual session. The telephone number of the State Medical Association in the Information Bureau, Hotel Texas, during the annual session is 3-9451. With three outside lines and three house telephones, excellent telephone information service will be available to registrants at the annual session.

The Woman's Auxiliary will have its headquarters at the Blackstone Hotel, two blocks north of the Hotel Texas. Courtesy and information committees from the Woman's Auxiliary to the Tarrant County Medical Society will be on duty in the Blackstone Hotel and the Hotel Texas. All ladies in attendance on the annual session will please register and obtain badges and programs from the Registration Bureau on the Mezzanine Floor of the Blackstone Hotel, immediately upon arrival in the city.

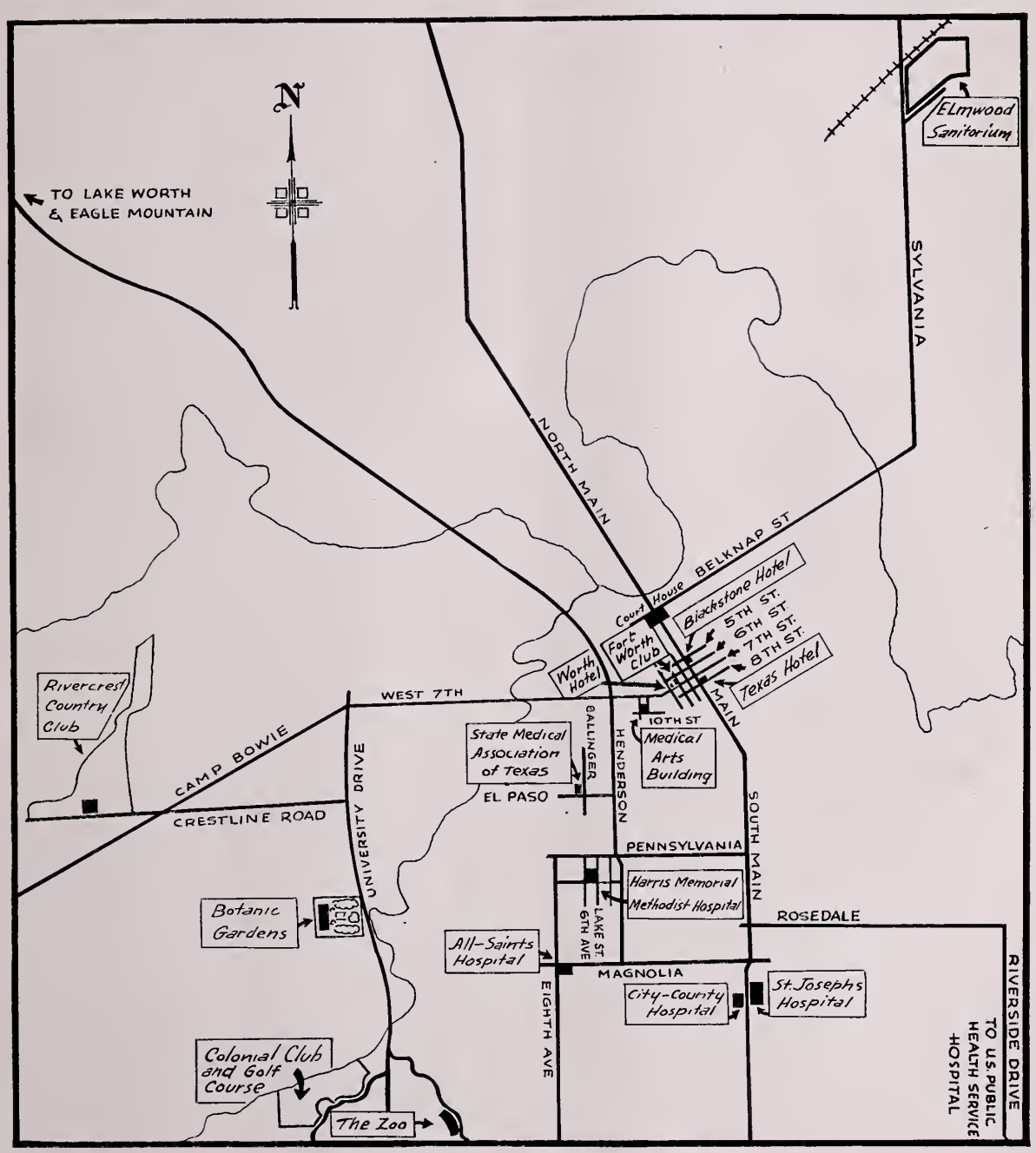
The Committee on Hotels will establish hotel information service in connection with the Information Bureau of the State Medical Association on the Mezzanine Floor of the Hotel Texas. Anyone in attendance on the annual session in need of help in connection with hotel accommodations will be gladly served.

The House of Delegates will meet in the Longhorn Room, Mezzanine Floor of the Hotel Texas. The first session will be held Monday, May 12, at 10:00 a. m.

The Board of Councilors will hold its meetings in Room 560, Hotel Texas.

The Council on Scientific Work.—Members of the Council, officers of the scientific sections for the present annual session and officers of the scientific sections for the 1942 annual session will hold a breakfast meeting in Centennial Room No. 1, Mezzanine Floor, Hotel Texas, at 8:00 a. m., Tuesday, May 13.

The Opening Exercises will be held in the Crystal



Fort Worth—Topographically Speaking.

Ballroom of the Hotel Texas, at 9:00 a. m., Tuesday, May 13.

The Ex-presidents Association will hold a luncheon in the Oak Room, Mezzanine Floor, Hotel Texas, at 12:45 p. m., Tuesday, May 13.

The Memorial Services will be held from 5:15 to 6:15 p. m., Wednesday, May 14, in the Crystal Ballroom of the Hotel Texas.

The President's Reception and Ball will be held in the Crystal Ballroom of the Hotel Texas, Tuesday, May 13, at 9:15 p. m. All members of the Association, guests and visitors are invited.

The Clinical Luncheons will be held from 12:45 to 2:45 p. m., Wednesday, May 14, and from 12:15 to 2:15 p. m., Thursday, May 15. There will be three sectional luncheons on Wednesday, namely, Medicine and Pediatrics; Surgery, Obstetrics and Gynecology, and Eye, Ear, Nose and Throat. There will be only one clinical luncheon on Thursday, the Combined Sections Luncheon. Tickets for the luncheons will be obtained from the Information Bureau. The cost of a ticket to a luncheon will be $1.

The Medicine and Pediatrics Luncheon, Wednesday, will be held in the Crystal Ballroom, Fourteenth Floor, Hotel Texas. The Surgery, Obstetrics and Gynecology Luncheon, Wednesday, will be held in The Den, Lower Level, Hotel Texas. The Eye, Ear, Nose and Throat Luncheon, Wednesday, will be held in the Colonial Room, Lobby Floor, Hotel Texas. The Combined Sections Luncheon, Thursday, will be held in the Crystal Ballroom, Fourteenth Floor, Hotel Texas.

Alumni Banquets will be held from 6:00 to 8:30 p. m., Tuesday, May 13. The University of Texas Alumni banquet will be held in the Longhorn Room, Mezzanine Floor of the Hotel Texas, and the Baylor University Alumni banquet will be held in the Colonial Room Lobby Floor of the Hotel Texas.

Any fraternity or alumni groups desiring reservations for banquets should write immediately to the Chairman of the Alumni Banquets Committee, Dr. W. C. Foster, Handley, Texas, or to any of the other members of the Committee, Drs. J. H. Grammar, H. M. Crabb, and H. T. Thomas of Fort Worth, and Valin R. Woodward, Arlington, Texas.

The Texas Pediatric Society will celebrate its twentieth anniversary with a dinner, entertainment program and dance at the 400 Club, Jacksboro Highway, Monday evening, May 12, with charter members of the organization as honor guests. Officers of the State Medical Association will also be guests.

A Chuck Wagon Dinner will be given Monday evening, May 12, for members of the Section on Radiology and their wives, honoring the guest of the Section, Dr. George W. Holmes and Mrs. Holmes, compliments of the radiologists of Fort Worth.

The Mu Sigma Nu medical fraternity will hold a banquet in the Alamo Room, Mezzanine Floor, Hotel Texas, from 6:30 p. m. to 7:45 p. m., Wednesday, May 14.

Credentials Committee, American College of Surgeons, will meet in Centennial Room No. 2, Hotel Texas, at 7:00 p. m., Sunday, May 11.

Tarrant County Medical Society Entertainment.—The Tarrant County Medical Society will entertain members, guests, visitors, and exhibitors registered at the annual session with a cocktail hour Wednesday, May 14, from 9:30 p. m. to 10:30 p. m., in the Colonial Room of the Hotel Texas, and the Florentine and French Rooms of the Blackstone Hotel. Special music will feature each occasion.

Tarrant County Medical Society will be host to all members, guests, visitors and exhibitors registered at the annual session for dancing, Wednesday, May 14, from 10:00 p. m. until 1:00 a. m. in the Crystal Ballroom of the Hotel Texas, and the Venetian Ballroom of the Blackstone Hotel. There will be special entertainment in connection with each dance.

HOTEL AND TOURIST COURT RATES

Texas.—Single rooms, $2.00 to $5.00; double rooms, $3.00 to $5.00; twin beds, $4.00 to $7.00; three persons in a room, $4.50 and up; parlor suites, $10.50 and up; air conditioned single rooms, $3.00 to $5.00; air conditioned double rooms, $4.00 to $7.00.

Blackstone.—Single rooms, $2.50, $3.00, $3.50, $4.00, $5.00; double rooms, $4.00, $4.50, $5.00, $6.00; twin beds, $5.00, $6.00, $7.00; suites, $10.00 and up.

Westbrook.—Single rooms without bath, $1.50; double rooms without bath, $2.50; single rooms with bath, $2.00, $2.50, $3.00; double rooms with bath, $3.00, $3.50, $4.00; twin bedroom with bath, $3.50, $4.00, $5.00; two room suites (bedroom, living room and bath), $8.00.

Worth.—Single rooms, $2.00; double rooms, $3.00; twin beds, $4.00; air conditioned single rooms, $3.00; air conditioned double rooms, $4.00; with twin beds, $4.50.

Milner.—Single rooms, $1.00 and $1.50; double rooms, $1.50 and $2.00; with twin beds, $2.50.

Mayo Courts.—Double rooms, $2.00; cottages, single and double rooms, $2.50 and $3.00; two rooms with three double beds, $6.00; double rooms and kitchen, $2.50 and $3.00. Complete hotel service.

El Patio Lodge.—Rooms, single or double, $2.00; with twin beds, $2.50 to $3.50; suites, four to six persons, $4.00 and $4.50. Complete hotel service. Private dining room; meals served in room if desired.

SCIENTIFIC SECTIONS

The places of meeting of scientfic sections will be as follows:

Section on Medicine, Crystal Ballroom, Fourteenth Floor, Hotel Texas.

Section on Surgery, Colonial Room, Lobby Floor, Hotel Texas.

Section on Obstetrics and Gynecology, Longhorn Room, Mezzanine Floor, Hotel Texas.

Section on Eye, Ear, Nose and Throat, Alamo Room, Mezzanine Floor, Hotel Texas.

Section on Radiology and Physiotherapy, Centennial No. 1, Mezzanine Floor, Hotel Texas.

Section on Public Health, French Room, Fourth Floor, Blackstone Hotel.

Section on Clinical Pathology, Centennial No. 2, Mezzanine Floor, Hotel Texas.

Section on Pediatrics, Cactus Room, Fourteenth Floor, Hotel Texas.

SCIENTIFIC EXHIBITS

The scientific exhibits will be displayed on the Fourteenth Floor of the Hotel Texas in the Blue Bonnet Court, which is the main passage way between the elevators and the Crystal Ballroom, where the general meetings will be held. An interesting group of scientific exhibits will be presented, in which honor guests of the Association are participating.

Motion pictures, including both silent and sound films, will be exhibited in the Oak Room, Mezzanine Floor, Hotel Texas.

A list of exhibitors follows:

H. L. Hilgartner, Jr., Austin: Kodachrome photographs of the fundi and external eye, showing normal and pathological processes.

James T. Mills, Dallas: Reconstructive surgery. Photographs and charts of plastic surgery before and after.

Karl John Karnaky, Houston: The physiological reactions in the vagina after the use of cotton and

acids—original research. Charts, diagrams and projected colored photographs.

HERBERT E. HIPPS, Marlin: Muscle pathologic changes, gross and microscopic, in anterior poliomyelitis.

TEXAS STATE BOARD OF MEDICAL EXAMINERS, Dr. T. J. Crowe, Dallas: Display of medical fakes and law violations.

LEWIS M. HELFER, San Antonio: X-ray studies of intracranial pathologic changes. X-ray diagnosis of intracranial pathologic lesions. A series of x-ray transparencies showing intracranial lesions.

LOUIS W. BRECK, El Paso: Treatment of fractures in patients over 70. Illustrative models of fractures of the neck of the humerus and neck of the femur. In addition, photographs of patients themselves, reproduction of x-rays and photographs of end-results, showing range of motion and other pertinent details.

G. W. N. EGGERS, Galveston: Malignant tumors of the bone. Diagrams and transparencies.

G. V. BRINDLEY, Temple: Cancer of the colon. Moulages and drawings, showing various methods of surgical technique in the treatment of carcinoma of the colon. Includes also moulages of pathological specimens, photomicrographs and statistics.

RALPH BOWEN, Houston: Nasal allergy in children. Pictorial exhibits, showing clinical problems presented in children who have nasal allergy. Facial and dental changes are pointed out. Cytologic study of nasal smears which will aid in differentiating allergy from infection. X-ray films of the sinuses demonstrating true allergic changes are also shown.

STATE MEDICAL ASSOCIATION COMMITTEE ON FRACTURES: Demonstrations of fracture treatment.

STATE MEDICAL ASSOCIATION COMMITTEE ON PNEUMONIA CONTROL: Charts showing the extent and results of the Pneumonia Control Program in Texas for the year 1940, and other charts of general interest in regard to pneumonia control.

PAUL M. LEVIN, Dallas: Electro-encephalography. Charts showing the normal brain waves and their changes in various nervous and mental disorders. Particular reference is made to their use in the diagnosis and prognosis of epileptic states.

JOE C. RUDE, Duke Hospital, Duke University, Durham, North Carolina: X-ray in the diagnosis of cranial and intracranial disease. Reproduction of x-ray films upon glass plates. Normal and abnormal conditions are demonstrated. Indications for ventriculography and encephalography are briefly discussed.

J. FRANKLIN CAMPBELL AND W. PORTER BROWN, Fort Worth: Lantern slide demonstration of dermatological lesions in their natural colors.

JOHN O. MCREYNOLDS, Dallas: Anatomical and surgical aspects of the crystalline lens system. Anatomical specimens, photographs and moving pictures in a cabinet.

JAMES GREENWOOD, JR., Houston: Spinal epidural varicosities. Specimens and charts.

THOMAS E. COOK, Dallas: The proposed state cancer hospital for Texas. Charts and illustrations.

AMERICAN MEDICAL ASSOCIATION, Thomas G. Hull, Director, Chicago, Illinois: The use and abuse of barbiturates. Exhibit of posters showing the use and abuse of barbiturates; a chart giving the names and chemical formulas of thirty products on the market; an exposition file and New and Nonofficial Remedies giving additional information.

JAMES B. MCNAUGHT, San Francisco, California: Trichinosis. Enlarged photographs showing different phases of disease with proper legends attached.

M. O. ROUSE AND C. O. PATTERSON, Dallas: Com-

DEMONSTRATIONS OF FRACTURE TREATMENT
Fracture Committee, State Medical Association
Walter G. Stuck, San Antonio, Chairman
May 13-14

Day and Hours	Application of Plaster of Paris (Booth 1)	Fractures About the Ankle (Booth 2)	Fractures About the Wrist (Booth 3)	Fractures About the Elbow (Booth 4)
	Fred E. Felder, Palestine, Member Fracture Committee	Joe B. Foster, Houston, Member Fracture Committee	Q. B. Lee, Wichita Falls, Member Fracture Committee	Joe White, Fort Worth, Member Fracture Committee
Tuesday, May 13 1 p. m.—4 p. m.	H. P. Radtke, Fort Worth. Louis W. Breck, El Paso.	Frank C. Hodges, Abilene. Sim Driver, Dallas.	Paul C. Williams, Dallas. J. W. Goode, San Antonio.	Ruth Jackson, Dallas. W. E. Barker, Corpus Christi.
Wednesday, May 14 9 a. m.—12 noon	I. S. McReynolds, Houston. W. A. Bishop, Wichita Falls.	Frank Goodwin, El Paso. Felix Butte, Dallas.	Charles F. Clayton, Fort Worth. Edward T. Smith, Houston.	T. E. Christian, San Antonio.

mon esophageal lesions, diagnosis and medical management. A case of instruments of the types used in esophageal diseases will be displayed.

S. R. SNODGRASS, Galveston: The electroencephalogram and its abnormalities in various clinical disorders. Instruments, charts, and legends. Demonstrations with the electroencephalograph will be offered.

MOTION PICTURES

ADOLFO URRUTIA, San Antonio: Total hysterectomy. Original technique of Dr. A. Urrutia, Sr.

KARL JOHN KARNAKY, Houston: (a) Sterility—its causes and treatment, (b) Leukorrhea—its causes and treatment.

LOUIS DAILY, Houston: Refinements in the technique of the radical mastoid operation and approved plastic flap.

LAWRENCE M. FALLIS, Detroit, Michigan: Partial gastric resection.

RAY K. DAILY, Houston: Ophthalmic surgery in color, illustrating technique.

JOHN ROBERTS PHILLIPS, Houston: The technique of total abdominal hysterectomy, emphasizing the importance of the operation in benign conditions when there is a cervix present.

S. A. COLLOM, JR., Texarkana: Sound movies of surgical procedures. (1) Appendectomy (sound-color). (2) Fracture of the neck of the femur nailed by the Engle-May method, black and white, sound. (3) Cholecystectomy for chronic cholecystitis and cholelithiasis, black and white, sound. (4) Subtotal abdominal hysterectomy for the removal of fibroids, color-silent. (5) Repair of the internal lateral ligament with removal of the medial semilunar cartilage in the left knee, color-silent. (6) Subtotal thyroidectomy for toxic goiter, silent-color.

TECHNICAL EXHIBITS

The technical exhibits will be displayed on the Lobby and Mezzanine floors of the Hotel Texas, headquarters for the annual session. These exhibits provide much of educational value for the physician. Without the armamentarium furnished by the medical concerns which exhibit at annual sessions, doctors would be seriously handicapped in the practice of scientific medicine. These exhibits are worthy of all the time and attention registrants at the meeting can give them. They should be visited without fail.

The list of exhibitors follows:

BOOKS

J. B. Lippincott Company will have on display in booth 1 two new books, namely, Grollman's Essentials of Endocrinology and Tobias' Essentials of Dermatology. Other important works to be displayed are Thorek's Modern Surgical Technic, Barborka's Treatment by Die, the second edition of Anus, Rectum, Sigmoid Colon by Harry E. Bacon, M. D., as well as two sensational sales leaders: Becker's Modern Dermatology and Syphilology and Leaman's Management of the Cardiac Patient.

The C. V. Mosby Company, St. Louis, cordially invites physicians attending the annual meeting to visit booth 9. Among the new volumes to be displayed will be the following: A new edition of Herrman's Synopsis of Diseases of the Heart and Arteries; Willius and Keys new work on Cardiac Classics; and new editions of Meakins' Practice of Medicine and Clendening-Hashinger's Methods of Treatment. Browse through the books in the Mosby booth.

W. B. Saunders Company, Publishers, Represented by J. A. Majors Company, Dallas and New Orleans, invite doctors to visit booths 6 and 13. New books to be displayed are Graybiel and White's Electrocardiography, Ladd and Gross' Abdominal Surgery in Childhood, Krusen's Physical Medicine, Butt and Snell's Vitamin K, the Mayo Clinic Volume and many others.

COSMETICS

Luzier's Fine Cosmetics and Perfumes will be displayed in booth 12. These preparations are selected to suit the individual's cosmetic requirements and preferences. Where allergy is suspected raw materials may be obtained for patch-testing. The formulary and information concerning products supplied by manufacturer. Mr. C. L. Rice, Divisional Distributor of these preparations, and persons associated with the sale of them in the state of Texas will be on hand to answer your questions.

DIETETIC SUPPLIES

Horlick's Malted Milk Corporation in booth 15 will exhibit Horlick's the Original Malted Milk, powder and tablets. Horlick's is a distinctive natural food combination containing the basic nutritive principles of full-cream milk and malted grain. Its ease of digestion, freedom from fiber and roughage, together with its rich calcium and phosphorus content, particularly recommend it to the physician.

Libby, McNeill & Libby cordially invites physicians to visit their exhibit in booth 35, where attendants will point out the merits of Homogenized Baby Foods, Chopped Foods and Evaporated Milk. Libby's special method of homogenization makes Libby's Baby Foods extra smooth, extra easy to digest.

M & R Dietetic Laboratories, Inc., Columbus, Ohio, booth 2, will display Similac and powdered SofKurd. Representatives will be glad to discuss the merit and suggested application of these products.

Mead Johnson & Company, booth 38, will have on display Dextri-Maltose, Pablum, Oleum Percomorphum and other infant diet materials. A visit to this booth will make physicians aware of the many helpful services this progressive company offers physicians and their slogan, "Servamus Fidem"—"We Are Keeping the Faith."

Paley-Sachs Food Company, Houston, Texas, will exhibit in booth 33, Mrs. Paley's Baby Food—a complete line of strained fruits, vegetables, soups, cereal and strained beef. Made in Texas from Texas vegetables. Noted for palatability. Rich in calories and mineral salts. Exceptionally rich in iodine. These fine foods are packed in Houston by a concern that specializes in foods for infants and younger children exclusively. Mrs. Paley's Baby Food is used exclusively by the physician in charge of feeding the Badgett Quadruplets of Galveston, Texas.

S. M. A. Corporation, Chicago, will exhibit in booth 8, an interesting new display, which represents the selection of infant feeding and vitamin products of the S. M. A. Corporation. Physicians who visit this exhibit may obtain complete information, as well as samples of S-M-A Powder and the special milk preparations—Protein S-M-A (Acidulated), Alerdex and Hypo-Allergic Milk.

INSTRUMENTS

A. S. Aloe Company, of St. Louis, Missouri, in space 11, will show a complete selection of Sharp and Smith American-made stainless steel instruments. Among the specialties displayed will be the Washington University Portable O-B Table, the De Bakey Scalpel, new Aloe Short Wave and Electrocardiograph. Aloe representative Guy E. Whale will be in charge of the exhibit.

A. P. Cary Company, Dallas-Houston, cordially invites physicians to visit their showing of the latest operative, diagnostic, and surgical instruments and equipment in booth 20.

J. E. Hanger, Inc., largest and oldest manufac-

turers of artificial limbs in the world, with a factory at 1706 Commerce Street, Dallas, will have an exhibit in booth 26. Wearers will be there to demonstrate various types of limbs, including the patented Hip Control. In addition, this year, a movie of wearers, including Monty Stratton, will be shown. Physicians who have patients in need of artificial limbs are cordially invited to bring them for consultation. All physicians in attendance on the meeting are most welcome to the exhibit, which is in charge of Mr. and Mrs. W. E. Findley.

Medcalf and Thomas will display in booth 25 a complete line of the new Ritter medical equipment, which should be of considerable interest to all attending the convention.

E. H. McClure Company, Dallas, in booth 3, will show a line of the finest surgical instruments obtainable on the American market, together with diagnostic instruments and equipment of various kinds, which it is hoped will be of interest to the profession. Mr. R. C. Lawson will be in charge.

V. Mueller & Company, Chicago, in booth 10, will exhibit instruments, both standard and special, for all the several branches of modern surgery. Among those on display will be several new Mueller items, as well as some of the modern Mueller-built equipment for both surgeon and hospital. Mr. Ford Dixon will be in charge.

Terrell Supply Company, in booths 22 and 23, will have on display a complete new line of Ritter Physicians Equipment, as well as a complete line of surgical instruments. The exhibit will be in charge of T. S. Curtis, T. H. Gothard and Elbert Reese.

Insurance

Medical Protective Company, Fort Wayne, Indiana, will exhibit in booth 39.

Miscellaneous

Philip Morris & Company, in booth 32, will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representative will be happy to discuss researches on this subject, and problems on the physiological effects of smoking.

Optical Equipment

American Optical Company will have on display in booth 27 all their latest models of ophthalmic instruments, including the new No. 590 Additive Phoroptor, and will feature the new Lloyd Stereo Campimeter as well as a complete line of diagnostic and refracting instruments.

Riggs Optical Company, distributors of Bausch and Lomb ophthalmic products, again takes pleasure in exhibiting at the meeting of the State Medical Association to show the latest in ophthalmic instruments and items of interest to the Eye Physician in booth 29.

Pharmaceuticals and Biologicals

Burroughs Wellcome & Co. (U. S. A.) Inc., New York, exhibiting in booth 30, will present a representative group of fine chemicals and pharmaceutical preparations, together with new and important therapeutic agents of special interest to the medical profession.

First Texas Chemical Manufacturing Company, Dallas, will exhibit in booth 24.

Eli Lilly and Company will demonstrate in booth 31, the germicidal efficacy of "Merthiolate" (Sodium Ethyl Mercuri Thiosalicylate, Lilly) and the compatibility of the antiseptic with body cells and fluids. Other new and useful products will be featured.

The Mennen Company, in booth 37, will exhibit their two baby products—Antiseptic Oil and Antiseptic Borated Powder. The Antiseptic Oil is now being used routinely by more than 90 per cent of the hospitals that are important in maternity work. Be sure to register at the Mennen exhibit and receive your kit containing demonstration sizes of their shaving and after-shave products; also, for the lucky number prize drawing to be held at the close of the convention for De Luxe Fitted Leather Toilet Kits.

Petrolagar Laboratories, Inc., Chicago, in booth 7, will offer, in addition to samples of the Five Types of Petrolagar, an interesting selection of descriptive literature and anatomical charts. Ask the Petrolagar representatives to show you the new Habit Time booklet. It is a welcome aid for teaching bowel regularity to your patients.

Scientific Sugars Company, in booth 40, will have representatives in attendance to be helpful to physicians in any way possible. Cartose, Hidex, Kinney's Yeast Extract, and the new Fortified Yeast Extract Tablet (Kinney) will be on display. A new preparation of interest to physicians will be first shown at this meeting.

Sharp & Dohme will have their new modern display at booth 28 this year, featuring 'Delvinal' Sodium, 'Lyovac' Bee Venom Solution and other 'Lyovac' biologicals. There will also be on display a group of new biological and pharmaceutical specialties prepared by this house, such as 'Propadrine' Hydrochloride products, 'Rabellon', 'Padrophyll', 'Riona', 'Depropanex' and 'Ribothiron.' Capable, well-informed representatives will be on hand to welcome all visitors and furnish information on Sharp & Dohme products.

Winthrop Chemical Company, Inc., cordially invites every member of the State Medical Association of Texas to visit booth 19, where representatives will gladly answer questions regarding the latest preparations introduced by this firm. Available to you are valuable booklets dealing with chemotherapeutic agents, vitamins, anesthetics, hypnotics, sedatives, antisyphilitics, diagnostics, diuretics, vasodilators, anti-allergics and others. Stop at this exhibit and make yoursef "at home"—a few moments spent here may be of considerable help later.

John Wyeth and Brother, Inc., cordially invites physicians to visit space 14, where they will exhibit the following pharmaceutical specialties: Amphojel, Wyeth's Alumina Gel for the management of hyperacidity and peptic ulcers; Wyeth's Hydrated Alumina Tablets for hyperacidity; A. B. M. C. Ointment for the relief of arthritic pain; Alulotion Ammoniated Mercury with Kaolin for the treatment of impetigo; Bepron, Wyeth's Beef Liver and Iron for the nutritional anemias; Bewon Elixir, Wyeth's palatable appetite stimulant; Duterra, Wyeth's vaginal lotion of alumina and kaolin; Kaomagma Wyeth's Magma of alumina and kaolin for the treatment of diarrhea and colloitis, and Mucara, the bulk producing laxative.

X-Ray and Physiotherapy Equipment

General Electric X-Ray Corporation will exhibit x-ray and physiotherapy equipment in booth 21.

The Gilbert X-Ray Company of Texas will display in booths 4 and 5 the latest in x-ray and physiotherapy apparatus. Make this exhibit a meeting place for you and your friends.

Johnson X-Ray and Electro Therapy Company, Dallas (booth 17) will display the latest Shockproof Mattern X-ray Units; a complete line of physiotherapy apparatus; cold quartz lamps, short wave apparatus; tissue cutting units, and "A Complete X-ray and Physical Therapy Service to the Profession." Be sure to visit this display.

R. P. Kincheloe Company, Dallas, will exhibit in booth 18.

The **W. A. Kyle Company** of Houston, Texas, in booth 36, will display the very latest in surgical instruments and hospital equipment.

The **Southwest X-Ray Company**, Dallas, booth 16, will display Standard X-Ray Apparatus. Electrocardiographs, short wave, and ultra-violet equipment will be shown. Dewitt T. Furr will be in charge.

Westinghouse X-Ray Company, Inc., Dallas, will exhibit x-ray and physiotherapy equipment in booth 34.

GOLF

The annual State Association golf tournament will be held at River Crest Country Club. The play in the tournament may occur on any of the three days of the annual session, May 13, 14 and 15. If a member plays more often than once he may turn in his best score. Prizes will be awarded for the low gross medal scores and also for the low net scores. For this purpose players should bring their official handicaps from their home professionals. Full particulars concerning the golf tournament may be obtained at the Information Bureau of the State Medical Association on the Mezzanine Floor of the Hotel Texas.

PUBLIC LECTURES

May 13, 1941

Business and Professional Women's Club (12:10 p. m.) Hotel Texas.
OZRO T. WOODS, Dallas.
Lily Roberts, Sponsor

Lions Club (12:15 p. m.) Hotel Texas.
JOE KOPECKY, San Antonio.
J. Haywood Davis, Sponsor

Station KFJZ (7:00 p. m.) 1201 W. Lancaster.
JARRETT E. WILLIAMS, Galveston.
W. P. Higgins, Sponsor

Station KGKO (4:30 p. m.) Medical Arts Building.
E. D. PLASS, Iowa City.
Carey Hiett, Sponsor

May 14, 1941

Texas Wesleyan College (10:00 a. m.) Polytechnic.
CHARLES T. STONE, Galveston.
J. R. Wise, Sponsor

Junior Chamber of Commerce (12:15 p. m.) Blackstone Hotel. TATE MILLER, Dallas.
J. Morris Horn, Sponsor

Station KGKO (4:30 p. m.) Medical Arts Building.
JAMES B. MCNAUGHT, San Francisco.
I. L. Van Zandt, Sponsor

Classroom Teachers Association (4:15 p. m.) Paschal High School. F. W. SCHLUTZ, Chicago.
I. P. Barrett, Sponsor

May 15, 1941

Kiwanis Club (12:15 p. m.) Hotel Texas.
JOHN W. SPIES, Galveston.
R. H. Gough, Sponsor

HOUSE OF DELEGATES

First Meeting, Monday, May 12, 10:00 a. m.
Longhorn Room, Mezzanine Floor, Hotel Texas

1. Call to order.
2. Roll call and announcement of result.
3. Reading of minutes of previous meeting.
4. Appointment of Reference Committees.
5. Report of Secretary.
6. Report of Treasurer.
7. Report of Board of Trustees.
8. Report of Board of Councilors.
9. Report of Council on Medical Defense.
10. Report of Executive Council.
11. Report of Council on Scientific Work.
12. Report of Council on Medical Economics.
13. Report of Standing Committees:
    - Committee on Collection and Preservation of Records.
    - Committee on Health Problems in Education.
    - Committee on Cancer.
    - Committee on Transportation.
    - Committee on Arrangements for the Annual Session.
    - Committee on Memorial Exercises.
14. Report of Special Committees:
    - Committee on Scientific Exhibits.
    - Committee on Medical Education and Hospitals.
    - Committee on Revision of Constitution and By-Laws.
    - Advisory Committee to the Woman's Auxiliary.
    - Committee on Mental Health.
    - Committee on Fractures.
    - Committee on Military Affairs.
    - Committee on Maternal and Child Health.
    - Advisory Board to the Texas Society of Medical Technologists.
    - Committee on Tuberculosis.
    - Committee on Venereal Diseases.
    - Committee on Postgraduate Medical Education.
    - Committee on Industrial Health.
    - Committee on Malaria.
    - Committee on Pneumonia Control.
    - Liaison Committee, Lone Star State Medical, Dental and Pharmaceutical Association.
    - Committee on Library Endowments.
15. Reports of Special Delegates:
    - Delegate to the Texas State Dental Society.
    - Delegate to the Texas Tuberculosis Association.
    - Delegate to the Texas Pharmaceutical Association.
    - Delegate to the Texas State Hospital Association.
    - Delegate to the Texas Society for Mental Hygiene.
    - Delegate to the Arizona State Medical Association.
    - Delegate to the Arkansas State Medical Society.
    - Delegate to the Louisiana State Medical Society.
    - Delegate to the New Mexico State Medical Society.
    - Delegate to the Oklahoma State Medical Association.
    - Delegate to the Texas Safety Association.
16. Presentation of Fraternal Delegates.
17. Report of Special Committees of the House.
18. Reading of Communications.
19. Reading of Memorials and Resolutions.
20. Unfinished Business.
21. New Business.
22. Reports of Reference Committees:
    - (1) Reference Committee on Credentials.
    - (2) Reference Committee on Reports of Officers and Committees.
    - (3) Reference Committee on Resolutions and Memorials.
    - (4) Reference Committee on Finance.
    - (5) Reference Committee on Amendments to Constitution and By-Laws.
    - (6) Reference Committee on Scientific Work.
    - (7) Board of Councilors.
    - (8) Board of Trustees.

23. Election of Officers (morning of last day):
President-elect.
Three Vice-presidents.
One Trustee (Expiration term John T. Moore).
Five Councilors (Expiration terms W. E. Ryan*, 2nd Dist.; R. T. Wilson, 7th Dist.; Herman C. Eckhardt, 8th Dist.; Judson L. Taylor, 9th Dist.; and A. E. Sweatland, 10th Dist.).
Two Delegates to A. M. A. (Expiration terms Holman Taylor, Felix P. Miller, and Sam E. Thompson).
Two Alternate Deelgates to A. M. A. (Expiration terms R. B. Anderson, Guy F. Witt, and Preston Hunt).
Member, Council on Medical Defense (Expiration term W. A. King).
Member, Council on Scientific Work (Expiration term J. E. Robinson—Nomination by President-elect).
Member, Council on Medical Economics (Expiration term W. F. Starley—Nomination by President-elect).
Member, Committee on Legislation (Expiration term H. W. Cummings—Nomination by President-elect).
Member, Committee on Collection and Preservation of Records (Expiration term W. B. Russ—Nomination by Retiring President, upon advice of Ex-Presidents Association).
Member, Committee on Health Problems in Education (Expiration term J. W. Torbett, Sr.—Nomination by President-elect).
Member, Committee on Cancer, (Expiration term A. A. Ross, Jr.—Nomination by President-elect).
Member, Committee on Postgraduate Medical Education (Expiration term Joe Thorne Gilbert—Nomination by President-elect).

24. Selection of Time and Place of Next Annual Session.

RELATED ORGANIZATIONS

TEXAS RAILWAY AND TRAUMATIC SURGICAL ASSOCIATION

Monday, May 12

Colonial Room, Lobby Floor, Hotel Texas

President—JOE BECTON, Greenville.
First Vice-President—P. R. DENMAN, Houston.
Second Vice-President—HOMER ALLEN, Brownwood.
Secretary-Treasurer—ROSS TRIGG, Fort Worth.

1. *President's Address: Traumatic Surgery.* JOE BECTON, Greenville.
2. *The McBurney Incision in Cases of Ruptured Appendix.* A. L. RIDINGS, Sherman.
3. *The Estimation of Disability Following Injuries to the Extremities.* EARL D. MCBRIDE, Oklahoma City.
4. *Role of Trauma in Causation of Hernia.* HAROLD SHELLEY, Fort Worth.
5. *Improved Method of Fixation in the Operative Treatment of Fractures.* CHARLES F. CLAYTON, Fort Worth.
6. *Industrial Dermatoses.* EVERETT C. FOX, Dallas.
7. *Emergency X-ray Examinations.* GEORGE W. HOLMES, Boston, Mass.
8. *The Hernia Problem in Industry.* L. S. FALLIS, Detroit, Michigan.
9. Business Session.
10. Election of Officers.
11. Old Fashioned Barbecue for members, their wives and our guests. (Transportation will be furnished.)

*Appointed to fill term of F. E. Hudson, resigned.

TEXAS SOCIETY OF GASTRO-ENTEROLOGISTS AND PROCTOLOGISTS

Monday, May 12, 11:00 a. m.

Centennial No. 2, Mezzanine Floor, Hotel Texas

President—MILFORD O. ROUSE, Dallas.
First Vice-President—HUGH WELSH, Houston.
Second Vice-President—G. E. BRERETON, Dallas.
Secretary—TOM E. SMITH, Dallas.

1. (11:00 a. m.) *Opening Remarks and Announcements.* MILFORD O. ROUSE, President, Dallas.
2. (11:15 a. m.) *Recent Advancements in Gastro-enterology.* LEROY DUGGAN, Houston.
3. (11:35 a. m.) *Recent Advancements in Proctology.* JACK KERR, Dallas.
4. (12:00 Noon) *Luncheon and Business Session for Members Only.*

SYMPOSIUM ON CHRONIC ULCERATIVE COLITIS

5. (2:00 p. m.) *Medical Aspects.* D. L. CURB, Houston.
6. (2:30 p. m.) *Surgical Aspects.* TOM E. SMITH, Dallas.
7. (3:00 p. m.) *Pathological Aspects.* MAY OWEN, Fort Worth.
8. (3:30 p. m.) *Allergic Aspects.* HARVEY BLACK, Dallas.
9. (4:00 p. m.) *Discussion.*

6:00 p. m.

Banquet for Members and Guests—MILFORD O. ROUSE, Dallas, presiding.

TEXAS STATE HEART ASSOCIATION

Monday, May 12, 9:00 a. m.

Crystal Ballroom, Fourteenth Floor, Hotel Texas

President—K. H. BEALL, Fort Worth.
Vice-President—GHENT GRAVES, Houston.
Secretary—VICTOR E. SCHULZE, San Angelo.

9:00 a. m. *Case Report: Paroxysmal Ventricular Tachycardia.* F. E. HUDSON, Stamford.
9:15 a. m. *Unusual Features and Complications of Coronary Occlusion.* STEPHEN A. FOOTE, JR., Houston
9:30 a. m. *Clinical Evaluation of Cyanate Therapy in Hypertension.* H. L. MCCLUNG, C. A. AULT, and S. A. SHELBURNE, Dallas.
9:45 a. m. *Association of Pernicious Anemia and Angina Pectoris.* WILL S. HORN, Fort Worth.
10:00 a. m. *Case Report: Subacute Bacterial Endocarditis.* S. J. LEWIS, Beaumont.
10:15 a. m. *Case Report: Peripheral Arterial Embolism Treated with Pavex and Papaverine.* ABBE LEDBETTER, Houston.
10:30 a. m. *Case Report: Traumatic Pericarditis in a Football Player.* RALPH L. COFFELT, Waco.
10:45 a. m. *Case Report: Electrocardiographic Changes in Pericarditis.* W. L. HOWELL, Fort Worth.

11:00 a. m. *Case Report: Heart in Myxedema.*
E. S. Ross, Dallas.

11:15 a. m. *Preventable Heart Disease.*
Walter B. Whiting, Wichita Falls.

11:30 a. m. *Curable Heart Disease.*
L. C. Carter, Marlin.

1:30 p. m.

Symposium on Evolution of Historical Epochs in Cardiology

1. *Harvey's Discovery of the Circulation.*
Ralph Major, Kansas City, Mo.
2. *Morgagni's Work on the Relation of Organic Changes to Clinical Symptoms.*
Henry M. Winans, Dallas.
3. *Herberden's Description of Angina Pectoris.*
Charles T. Stone, Galveston.
4. *Withering's Contribution of Digitalis.*
Edward H. Schwab, Galveston.
5. *Laennec's Discovery of the Stethoscope.*
William J. Kerr, San Francisco.
6. *V. Basch's Bloodless Mensuration of the Blood Pressure.* J. Shirley Sweeney, Dallas.
7. *Mackenzie's Work on the Arrhythmias.*
Joe Kopecky, San Antonio.
8. *Einthoven's String Galvanometer.*
George Herrman, Galveston.

4:30 p. m. Business Session.

TEXAS ALLERGY ASSOCIATION

Monday, May 12, 10:00 a. m.

Alamo Room, Mezzanine Floor, Hotel Texas

President—Boen Swinny, San Antonio.

Executive Committee—Sim Hulsey, Fort Worth; W. H. Browning, Shreveport, La.; Rankin Denny, Tulsa, Okla.

Secretary—Homer E. Prince, Houston.

1. *Inhalant Factors in Asthma and Hay Fever Peculiar to Corpus Christi.*
Saul Grossman, Corpus Christi.
Discussion by Homer E. Prince, Houston.
2. *Some Remarks Concerning the Possible Etiology of Appendicitis.* L. O. Dutton, El Paso.
Discussion by William H. Browning, Shreveport, La.
3. *Cardiovascular Disease in Asthma.*
William H. Browning, Shreveport, La.
Discussion by Ralph Bowen, Houston.
4. *Loeffler's Syndrome.*
Geo. T. O'Byrne, Corpus Christi.
Discussion by Ralph Bowen, Houston.
5. *Enteric Coated Pills in the Control of Pollinosis.*
Narcisse Thiberge, New Orleans, La.
Discussion by Harvey J. Black, Dallas.
6. *A Consideration of the Mechanism of Food Allergy.*
Herbert Rinkel, Kansas City, Mo.

12:30 p. m.—Luncheon

Round Table Discussion on Headache by Orval Withers, Kansas City, Mo., Ford Wolf, Temple, and Samuel Schwartzberg, San Antonio.

7. *Bronchiectasis with Terminal Lipoid Pneumonia.*
J. H. Grammer, Fort Worth.
Discussion by Joseph McVeigh and Sim Hulsey, Fort Worth.
8. *Grass Flora of Texas.*
R. C. Potts, B. A., A. & M. College, College Station. (By Invitation.)
9. *Observations on Six Hundred Allergic Cases.*
George W. Owen, Jackson, Miss.
Discussion by Ralph Bowen, Houston.
10. *Army Experiences with Ids.*
Capt. J. W. H. Rouse, San Antonio.
11. *Report on Several Cases of Iva Augustofolia Sensitization of the Skin.*
Wm. A. Smith, Beaumont, and Homer E. Prince, Houston.

7:00 p. m.—Informal Dinner

1. *Address.* Tell Nelson, Evanston, Ill.

(The general medical profession is cordially invited to attend the morning and afternoon scientific sessions.)

TEXAS ORTHOPEDIC ASSOCIATION

Monday, May 12.

Oak Room, Mezzanine Floor, Hotel Texas

President—W. B. Carrell, Dallas.

Vice-President—E. M. Cowart, Houston.

Secretary-Treasurer—Ruth Jackson, Dallas.

1. Luncheon (12:30 p. m.).
2. Business Session.
3. *A Study of Some of the Problems of the Texas Crippled Childrens Program.*
   a. *The Proper Correlation of an Education Program.*
   Walter G. Stuck, San Antonio.
   b. *The Spastic Child.* Joe Foster, Houston.
   c. *The Convalescent Home.*
   Louis Breck, El Paso.
   d. *Borderline Disabilities.*
   P. M. Girard, Dallas.

TEXAS ASSOCIATION OF MEDICAL ANESTHETISTS

Monday, May 12, 1:00 p. m.

Cactus Room, Fourteenth Floor, Hotel Texas

President—Thomas H. Compere, Houston.

Vice-President—Frank O. Barrett, El Paso.

Secretary-Treasurer—R. A. Miller, San Antonio.

1. *A Study of Anesthetic Mortality.*
J. D. McCulley, Houston.
2. *Spinal Anesthesia.* C. M. Simpson, Temple.
3. *Problems in Obstetrical Anesthesia.*
E. D. Embree, Houston.
4. *Anesthesia Following Pneumonectomies.*
Robert A. Miller, San Antonio.
5. *General Discussion.*

CONFERENCE OF COUNTY AND CITY HEALTH OFFICERS

Monday, May 12,

9:00 a. m. to 4:30 p. m.

French Room, Fourth Floor, Blackstone Hotel

1. *Annual Address.* George W. Cox
State Health Officer, Austin.
2. *Federal, State and Local Administration of Health Problems in Areas Surrounding Military Establishments.* Knox E. Miller,
Medical Director, U. S. P. H. S.
3. *A Water-Borne Epidemic in a Small City.*
R. C. Felts,
City Health Officer, San Saba.

4. *The Control of Estivo-autumnal Malaria.* GRADY DEATON, Director Cameron County Health Unit, Brownsville.
5. *Malarial Inoculation—The Methods Employed in Texas State Institutions.* J. E. SORELL, Malariologist, Texas State Department of Health, Austin.

1 p. m.

6. *Modern Standards for Training Health Officers.* W. S. LEATHERS, Dean and Professor of Preventive Medicine and Public Health, Vanderbilt University School of Medicine, Nashville, Tenn.
7. *The Department of Preventive Medicine and Public Health in the Medical Branch of the University.* JOHN W. SPIES, Dean, University of Texas School of Medicine, Galveston.
8. *High Lights on the Collection of Vital Statistics in Texas.* W. A. DAVIS, Texas State Registrar of Vital Statistics, Austin.
9. *Progress of the Venereal Disease Control Program.* A. M. CLARKSON, Director, Venereal Disease Control Program, State Health Department, Austin.
10. *Progress in the Public Health Laboratory Field.* S. W. BOHLS, Director, State Hygienic Laboratories, Austin.

TEXAS NEUROLOGICAL SOCIETY

Monday, May 12, 9:00

Centennial No. 1, Mezzanine Floor, Hotel Texas

President—WILMER L. ALLISON, Fort Worth.

First Vice-President—WILLIAM THOMAS, Terrell.

Second Vice-President—E. M. PERRY, Dallas.

Secretary—MELBOURNE J. COOPER, San Antonio.

Members and guests will meet at 9:00 a. m. in Centennial No. 1, Mezzanine Floor, Hotel Texas, from which point transportation facilities will be provided to the United States Public Health Service Hospital, where a morning clinical session will be presented by members of the staff of that institution.

2:30 p. m.

Centennial No. 1, Mezzanine Floor, Hotel Texas

1. *Unusual Tumors in the Region of the Third Ventricle.* JAMES GREENWOOD, JR., Houston.
2. *A Case for Diagnosis.* WAYNE TAYLOR, Fort Worth.
3. *The Nervous System in Conditions of Oxygen Lack.* MELVIN W. THORNER, Randolph Field.
4. *Fear as a Psychological Element and a Psychiatric Symptom.* SAMUEL D. SWOPE, El Paso.
5. *Election of Officers.*

ORGANIZATION MEETING TEXAS CHAPTER AMERICAN COLLEGE OF CHEST PHYSICIANS

Tuesday, May 13, 6:00 p. m.

Oak Room, Mezzanine Floor, Hotel Texas

ORVILLE E. EGBERT, Governor of the College, El Paso, Presiding.

1. *Dinner.*—Fellows and Associates, American College of Chest Physicians of Texas.
2. *Organization of Texas Chapter of the College.*
   a. Adoption of constitution and by-laws.
   b. Election of officers.
3. *Fungus Disease of the Lung.* R. G. MCCORKLE, C. J. KOERTH, and J. M. DONALDSON, San Antonio.

Discussion by LESLIE M. SMITH, El Paso, and ABBE LEDBETTER, Houston.

Announcements and Program of the TWENTY-THIRD ANNUAL SESSION of the WOMAN'S AUXILIARY TO THE STATE MEDICAL ASSOCIATION OF TEXAS

May 12 to 14, 1941
FORT WORTH, TEXAS

OFFICERS

MRS. WILLIAM HIBBITTS, President, Texarkana.
MRS. S. F. HARRINGTON, President-elect, Dallas.
MRS. A. C. SCOTT, SR., Honorary Life President, Temple.
MRS. H. LESLIE MOORE, First Vice-President, Organization Chairman, Dallas.
MRS. A. E. MOON, Second Vice-President, Physical Examination Chairman, Temple.
MRS. A. B. PUMPHREY, Third Vice-President, *Hygeia* Chairman, Fort Worth.
MRS. J. B. FOSTER, Fourth Vice-President, Program Chairman, Houston.
MRS. WALTER MINSCH, Recording Secretary, Kerrville.
MRS. RALPH CROSS, Corresponding Secretary, Texarkana.
MRS. J. FRANK CLARK, Treasurer, Abilene.
MRS. J. W. TOTTENHAM, Parliamentarian, Brownwood.
MRS. W. F. ARMSTRONG, Publicity Secretary, Fort Worth.

STANDING COMMITTEE CHAIRMEN

Legislative—Mrs. H. S. Renshaw, Fort Worth.
Memorial Fund—Mrs. L. S. Thompson, Dallas; Mrs. J. O. McReynolds, Dallas; Mrs. F. F. Kirby, Waco, and Mrs. R. B. Homan, El Paso.
Special Advisory—Mrs. J. O. McReynolds, Dallas; Mrs. W. R. Thompson, Fort Worth, and Mrs. Frank N. Haggard, San Antonio.
Historian—Mrs. C. H. Reese, Waco.
Student Loan Fund—Mrs. M. L. Graves, Houston; Mrs. John T. Moore, Houston, and Mrs. L. B. Leake, Temple.
George Plunket Red Scholarship—Mrs. P. R. Denman, Houston; Mrs. D. F. Kerbow, Paris, and Mrs. W. C. Barnard, Corpus Christi.
Revisions—Mrs. W. J. Johnson, San Antonio; Mrs. B. F. Chambers, Port Arthur, and Mrs. S. M. Hill, Dallas.
Resolutions—Mrs. C. E. Southern, Burton; Mrs. L. F. Johnson, Abilene, and Mrs. A. L. Thomas, Ennis.
Reference—Mrs. John W. Burns, Cuero; Mrs. S. E. Thompson, Kerrville, and Mrs. J. H. Marshall, Dallas.
Archives—Mrs. W. A. Wood, Waco; Mrs. H. R. Dudgeon, Waco; Mrs. John T. Moore, Houston; Mrs. E. H. Cary, Dallas, and Mrs. Henry Trigg, Fort Worth.
Texas Research to Southern Medical Association—Mrs. G. V. Brindley, Temple.
Public Relations—Mrs. D. F. Kerbow, Paris.
Budget—Mrs. O. M. Marchman, Dallas; Mrs. S. H. Watson, Waxahachie, and Mrs. J. Frank Clark, Abilene.

Memorial—Mrs. E. C. Ferguson, Beaumont; Mrs. W. H. Sory, Jacksonville, and Mrs. R. T. Wilson, Austin.
Exhibits—Mrs. T. H. Thomason, Fort Worth; Mrs. H. R. Dudgeon, Jr., Waco, and Mrs. Q. B. Lee, Wichita Falls.
Bulletin—Mrs. F. F. Kirby, Waco.
Convention and Registration—Mrs. C. O. Terrell, Fort Worth.

COUNCIL WOMEN

District One—Mrs. R. B. Homan, El Paso.
District Two—Mrs. R. B. Cowper, Big Spring.
District Three—Mrs. E. W. Moss, Wellington.
District Four—Mrs. Charles Bailey, Ballinger.
District Five—Mrs. William L. Secor, Kerrville.
District Six—Mrs. Phil Bleakney, Harlingen.
District Seven—Mrs. T. D. Vaughn, Bertram.
District Eight—Mrs. Harvey Renger, Hallettsville.
District Nine—Mrs. J. B. Johnson, Galveston.
District Ten—Mrs. W. F. McCreight, Kirbyville.
District Eleven—Mrs. J. K. Webster, Athens.
District Twelve—Mrs. Evelyn Rice Hutchins, Marlin.
District Thirteen—Mrs. A. L. Borchardt, Vernon.
District Fourteen—Mrs. William Thomas, Terrell.
District Fifteen—Mrs. R. D. Moore, Jr., Mt. Pleasant.

LOCAL CONVENTION CHAIRMEN

General Arrangements—Mrs. H. S. Renshaw.
Registration—Mrs. C. O. Terrell, Sr.
Courtesy—Mrs. W. F. Armstrong.
Information—Mrs. R. H. Gough.
Publicity—Mrs. A. D. Ladd.
Transportation—Mrs. George R. Enloe.
Exhibits—Mrs. T. H. Thomason.
Decorations—Mrs. J. R. Wise.
Executive Board Dinner—Mrs. A. B. Pumphrey.
President's Luncheon—Mrs. Rex Howard.
Past Presidents' Dinner—Mesdames W. R. Thompson and Henry Trigg.
Council Women and District Presidents' Breakfast—Mrs. W. G. Phillips.
Hospitality—Mrs. W. R. Thompson.
Tea—Mrs. T. H. Thomason.
Ushers—Mrs. J. W. Eschenbrenner.

Monday, May 12

(Hostess Room, Suite, 17AA, Mezzanine, Blackstone Hotel.)

Registration Bureau on the Mezzanine of the Blackstone Hotel. Courtesy and Information Committees from the Woman's Auxiliary to the Tarrant County Medical Society in Blackstone Hotel and Hotel Texas. All women in attendance are invited to attend the business sessions, tea and luncheon.

Exhibits will be on the Mezzanine Floor, Blackstone Hotel.

11:00 a. m.—Meeting of the Student Loan Fund Committee, Blackstone Hotel, Mrs. M. L. Graves, Chairman.

11:00 a. m.—Meeting of the George Plunkett Red Scholarship Fund, Blackstone Hotel, Mrs P. R. Denman, Chairman.

3:00 p. m.—Executive Board Meeting, Room 1610, Blackstone Hotel.

7:00 p. m.—Dinner honoring Mrs. William Hibbitts, State President, Members of the State Executive Board, Past Presidents of the State Auxiliary, County Presidents, Nominating Committee, and their husbands, Venetian Ballroom, Blackstone Hotel. "No Host Affair."

Tuesday, May 13

8:00 a. m.—Breakfast for Councilwomen, and District President, Florentine Room, Blackstone Hotel. Hostesses, Mesdames H. Leslie Moore and William Hibbitts.

9:00 a. m.—Opening Exercises of State Medical Association, Crystal Ballroom, Fourteenth Floor, Hotel Texas.

11:00 a. m.—First Session, General Meeting of the Auxiliary to the State Medical Association, Venetian Ballroom, Blackstone Hotel. Mrs. William Hibbitts, President, presiding.
Invocation—Mrs. S. H. Watson, Waxahachie.
Address of Welcome—Mrs. J. F. McVeigh, Fort Worth.
Response—Mrs. J. Frank Clark, Abilene.
Greetings—Mrs. Scott Applewhite, San Antonio.
Introduction of General Chairman and Announcements—Mrs. H. S. Renshaw, Fort Worth.
Reports of all State Officers, Chairmen, and District Presidents.
Adjournment at 1:00 p. m.

3:30 p. m. to 5:00 p. m.—Tea honoring Mesdames William Hibbitts, President; S. F. Harrington, President-elect, and R. E. Mosiman, President-elect of the Woman's Auxiliary to the American Medical Association, courtesy of the Tarrant County Auxiliary, River Crest Country Club.

7:00 p. m.—Past Presidents' Dinner, honoring Mrs. Scott Applewhite, San Antonio, Fort Worth Club. Mesdames Henry Trigg, H. R. Dudgeon, R. B. Homan, W. R. Thompson, F. F. Kirby, S. H. Watson, hostesses.

9:15 p. m.—Reception and Ball, honoring Dr. Preston Hunt, Texarkana, President of the State Medical Association, Crystal Ballroom, Fourteenth Floor, Hotel Texas.

Wednesday, May 14

9:00 a. m.—Second Session, General Meeting of the Auxiliary to the State Medical Association, Venetian Ballroom, Blackstone Hotel. Mrs. William Hibbitts, President, presiding.
Invocation—Mrs. J. T. Robison, Texarkana.
Announcements.
Address—Dr. Preston Hunt, President, State Medical Association.
Address—Mrs. R. E. Mosiman, Seattle, Washington, President-elect of the American Medical Auxiliary.
Announcement of Prize Winners.
Business Session: Reports of Council Women, County Presidents, Nominating Committee, and Election of Officers.
Report of Resolutions Committee.

12:30 p. m.—Luncheon, Fort Worth Club. All doctor's wives are invited to attend. "No host affair."
President's Report.
Installation of New Officers—Mrs. F. N. Haggard, San Antonio.
Style Show, presented by The Fair Store.

3:30 p. m.—Post Executive Board Meeting, Private Dining Room, Fort Worth Club.

5:15 p. m. to 6:15 p. m.—Memorial Services of the State Medical Association and Woman's Auxiliary, Crystal Ballroom, Fourteenth Floor, Hotel Texas.

9:30 p. m. to 10:30 p. m.—Cocktail Hour, Colonial Room of Hotel Texas, and Florentine and French Rooms of the Blackstone Hotel for all members, guests, visitors and exhibitors registered at the annual session, compliments of Tarrant County Medical Society.

10:00 p. m. to 1:00 a. m.—Dance, Crystal Ballroom of the Hotel Texas and Venetian Ballroom of the Blackstone Hotel, for all members, guests, visitors and exhibitors registered at the annual session, compliments of Tarrant County Medical Society.

MISCELLANEOUS

COMING MEETINGS AND CLINICS

State Medical Association of Texas, Fort Worth, May 12-15, 1941. Dr. Preston Hunt, Texarkana, President; Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth, Secretary.

American Medical Association, Cleveland, June 2-6, 1941. Dr. Nathan B. Van Etten, New York, President; Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Southern Medical Association, St. Louis, Missouri. November 11-14, 1941. Dr. Arthur T. McCormack, Louisville, Kentucky, President; C. P. Loranz, Empire Building, Birmingham, Alabama, Secretary-Manager.

Texas Allergy Association, Fort Worth, May 12, 1941. Dr. Boen Swinny, Medical Arts Building, San Antonio, President; Dr. Homer Prince, Medical Arts Building, Houston, Secretary.

Texas Ophthalmological and Otolaryngological Society, San Antonio, December 12 and 13, 1941. Dr. E. L. Goar, Houston, President; Dr. Dan Brannin, Medical Arts Building, Dallas, Secretary.

Texas Radiological Society. Dr. M. H. Glover, Wichita Falls, President; Dr. L. W. Baird, Temple, Secretary.

Texas Club of Internists, Pacific Coast, August, 1941. Dr. George Herrmann, Galveston, President; Dr. M. B. Whitten, Medical Arts Building, Dallas, Secretary.

Texas Association of Obstetricians and Gynecologists, Galveston, 1941. Dr. Roy Grogan, Fort Worth, President; Dr. Julius McIver, 1314 Medical Arts Building, Dallas, Secretary.

Texas Pediatric Society, Fort Worth, May 13, 1941. Dr. C. P. Jasperson, Corpus Christi, President; Dr. Frank Lancaster, 4409 Fannin Street, Houston, Secretary.

Texas Neurological Society, Fort Worth, May 12, 1941. Dr. Wilmer Allison, Fort Worth, President; Dr. Melbourne J. Cooper, Nix Professional Building, San Antonio, Secretary.

Texas Railway and Traumatic Surgical Association, Fort Worth, May 12, 1941. Dr. J. D. Becton, Greenville, President; Dr. Ross Trigg, First National Bank Building, Fort Worth, Secretary.

Texas State Pathological Society, Dallas, 1942. Dr. T. C. Terrell, Fort Worth, President; Dr. M. D. Bell, 1109 Medical Arts Building, Dallas, Secretary.

Texas State Heart Association, Fort Worth, May 12, 1941. Dr. Joseph Kopecky, San Antonio, President; Dr. V. E. Schulze, San Angelo, Secretary.

Texas Dermatological Society, Fort Worth, May 12, 1941. Dr. W. A. Smith, Beaumont, President; Dr. Duncan O. Poth, 1230 Nix Professional Building, San Antonio, Secretary.

Texas Surgical Society, Temple, April 7 and 8, 1941. Dr. W. L. Crosthwait, Waco, President; Dr. Walter Stuck, 1426 Nix Professional Building, San Antonio, Secretary.

Texas Orthopedic Society, Fort Worth, May 12, 1941. Dr. W. B. Carrell, Dallas, President; Dr. Ruth Jackson, Medical Arts Building, Dallas, Secretary.

Texas Association of Medical Anesthetists, Fort Worth, May 12, 1941. Dr. Thomas H. Compere, Houston, President; Dr. R. A. Miller, 1415 Nix Professional Building, San Antonio, Secretary.

Texas Society of Gastro-enterologists and Proctologists, Fort Worth, May 12, 1941. Dr. M. O. Rouse, Dallas, President; Dr. Tom E. Smith, 1207 Medical Arts Building, Dallas, Secretary.

Texas Mental Hygiene Association. Dr. Wilmer Allison, Fort Worth, President; Miss Lucille Allen, Highland Park High School, Dallas, Secretary.

Texas Tuberculosis Association, San Antonio, May 5-8, 1941. Dr. E. G. Faber, Tyler, President; J. W. Butler, Galveston, Secretary.

Texas Public Health Association, Corpus Christi, November 3, 4, and 5, 1941. Dr. George A. Gray, Sweetwater, President; Mr. Alan C. Love, Austin, Travis County Health Unit, Austin, Secretary.

Second District Medical Society, Dr. W. V. Ramsey, Abilene, President; Dr. W. T. Sadler, Merkel, Secretary.

Third, Panhandle, District Medical Society, Amarillo, April 8 and 9, 1941. Dr. F. A. White, Childress, President; Dr. H. H. Latson, 301 Polk St., Amarillo, Secretary.

Fourth District Medical Society, San Angelo, October, 1941. Dr. O. H. Chandler, Ballinger, President; Dr. F. T. McIntire, San Angelo, Secretary.

Fifth and Sixth, Southwest District Society, Laredo, 1941. Dr. T. E. Christian, San Antonio, President; Dr. W. W. Bondurant, Jr., 1512 Nix Professional Building, San Antonio, Secretary.

Seventh, Austin District. Dr. Lee Edens, Austin, President; Dr. J. Gordon Bryson, Bastrop, Secretary.

Eighth, Ninth and Tenth District Medical Society, Galveston, April 17 and 18, 1941. Dr. Walter D. Brown, Beaumont, President; Dr. A. A. Ledbetter, Medical Arts Building, Houston, Secretary.

Eleventh District Society, Tyler, April 24. Dr. Clayton Shirley, Tyler, President; Dr. C. C. McDonald, Tyler, Secretary.

Twelfth, Central Texas District Society, Cameron, July 8, 1941. Dr. Howard O. Smith, Marlin, President; Dr. C. G. Swift, Cameron, Secretary.

Thirteenth, Northwestern District Society. Dr. J. Edward Johnson, Mineral Wells, President; Dr. Charles M. McCollum, Jr., 210 Mid-Continent Building, Fort Worth, Secretary.

Fourteenth District Society, Sulphur Springs, June, 1941. Dr. Joe Becton, Greenville, President; Dr. R. S. Usry, 1835 Garrett, Dallas, Secretary.

Fifteenth, Northeast District Society, Longview, October 14, 1941. Dr. Hugh M. Ragland, Gilmer, President; Dr. J. N. White, Texarkana, Secretary.

SULFATHIAZOLE CONTAMINATION—WARNING

Winthrop Chemical Company, Inc., 170 Varick Street, New York, reports that in the manufacture of tablets of Sulfathiazole-Winthrop, "M. P." control series (December, 1940), some of the tablets were accidentally contaminated with phenobarbital. Immediately upon discovery of the contamination active steps were taken by the company to recover the entire series, in conjunction with the nation-wide effort of the U. S. Food and Drug Administration and other public agencies. Physicians are requested to examine the mark on any package of any sulfathiazole tablets in their possession and return to Winthrop Chemical Company, Inc., for exchange, any marked with the letters "M. P."; that if any tablets have been dispensed with these control letters, an effort be made to recover all tablets that have not been consumed.

TEXAS PEDIATRIC SOCIETY CELEBRATES TWENTIETH ANNIVERSARY

FRANK H. LANCASTER
HOUSTON, TEXAS

On May 12, 1921, in Dallas, Texas, a group of physicians met at the request of Dr. H. Leslie Moore and discussed the question of a permanent organization for the pediatrists of this state. The following physicians participated in this meeting: A. H. Braden, B. E. Greer, E. W. Loomis, J. F. Perkins, Marcus Carr, L. O. Godley, H. L. Moore, R. Spence, W. M. Dickens, A. T. Goode, G. McFarland, R. S. Usry, J. W. Embree, M. A. Hopkins, A. L. McElhannon and M. L. Wilbanks.

It was the feeling of this group that there existed a desire among the pediatricians of the state to form a permanent organization for the purpose of stimulating interest and study in pediatrics and promoting a higher grade of pediatric practice in the state. Believing that such an organization would bring about a more thorough acquaintance among those interested in pediatrics and would promote a more congenial spirit and closer coöperation among this group, it was resolved to form such a permanent organization and to adopt a constitution and by-laws.

The following officers were elected: President, Dr. H. L. Moore, Dallas; vice-president, Dr. M. L. Wilbanks, Greenville, and secretary-treasurer, Dr. May Agnes Hopkins, Dallas.

From this meeting has developed a State pediatric organization which ranks among the first of those in the nation, both in membership, activity, and in prestige. Annual meetings were held through the year 1924, when the idea was adopted that two meetings per year should be held, one in the spring to be termed the Annual Business Meeting and the one in the fall to be termed the Fall Clinical Meeting, at which time the program would be devoted to didactic and clinical work. Since that year, two meetings have been held each year, and the Society has grown to a membership of 110, which is divided into active and associate groups. Any physician in good standing with the State Medical Association is eligible to associate membership, and those physicians limiting their work entirely to pediatrics are classed in the active group.

It was through the efforts of this Society that the present Pediatric Section of the State Medical Association was formed last year and functions for the

first time in the meeting in Fort Worth as a separate section to present a pediatric program. In addition, the Society last year contributed one thousand dollars to the Library Memorial Fund of the State Medical Association, being one of the three early contributors to this worthy cause.

In Fort Worth, Texas, May 12, twenty years from the date of organization of the Society, the officers and membership have planned a dinner with entertainment program and dance at the Colonial Club, to which all of the above men have been invited as honor guests. In addition, the Society will be host to the officers of the State Medical Association on this occasion.

The present officers of the Texas Pediatric Society are: President, Dr. C. P. Jasperson, Corpus Christi; president-elect, Dr. P. E. Luecke, Dallas; secretary-treasurer, Dr. F. H. Lancaster, Houston.

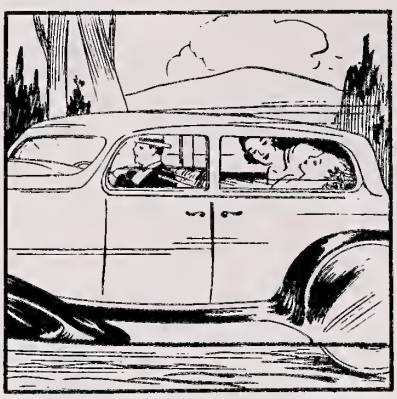
EDITOR'S NOTE.—A series of such articles as the following, because of their pungency, simplicity of style, obviously prepared for lay consumption, was recently released to the lay press of the State, and widely published. They are being reproduced in the JOURNAL as examples of what can be done to inform the public on important health problems. We are indebted to the San Antonio *Express* for invaluable aid in this particular campaign.

LEAVE 'EM WHERE THEY LIE

What are the wrong things to do—THE DON'TS?

1. DON'T pile him into a car, open the window to give him air and race to the hospital. He will die from exposure and increase of shock and it will be you that killed him—not the injury.

2. DON'T try to set a broken leg or arm or anything else in the presence of shock. To manhandle him increases shock.



Conditions to Meet and What to Do About Shock—Leave 'Em Where They Lie.

3. DON'T even let a doctor or ambulance driver do that. It is the same to the man in shock, no matter who does it.

4. DON'T permit every one who comes along to ask him questions, feel his pulse and monkey with him. Be the one to stick to your guns; head down, warm, quiet—that saves 'em; other ways kill 'em.

If he has a wound and is bleeding, what must you do?

Treat the shock. Place a handkerchief over the wound and apply light pressure. Change as necessary and stay with it. Treat the shock. Don't apply a tourniquet unless the blood spurts—comes in jets.

Once more, how to recognize shock; cold, clammy skin; fast pulse; excited; talking; says feels fine even though he may have a broken bone.

Leave 'em where they lie.

(Prepared by the Fracture Committee, Texas State Medical Association; sponsored by Texas State Highway Department and Texas Public Safety Commission.)

CORRECTION

The announcement of a new addition to the family of Dr. and Mrs. C. E. Painton of Port Arthur, which appeared in the February, 1941 JOURNAL contained a number of errors. First, the family name was misspelled Pointon instead of Painton. Second, the newcomer was a boy, named Russell, and not a daughter. The date of birth was given correctly, namely, December 5, 1940.

ELEVENTH DISTRICT MEDICAL SOCIETY MEETING

The Eleventh District Medical Society will meet April 24, at Tyler, advises Dr. C. C. McDonald, Tyler, secretary. The following scientific program will be presented.

10:00 a. m. Practical Treatment of Common Dermatological Problems—Manuel G. Bloom, M. D., Houston.
10:30 a. m. Gastro-intestinal and Respiratory Allergy in Children—Ralph Bowen, M. D., Houston.
11:00 a. m. Corneal Lesions—W. R. Buffington, M. D., Professor of Ophthalmology, Tulane University, New Orleans.
2:00 p. m. Diagnosis and Management of Dystocia—Williard Cooke, M. D., Professor of Obstetrics and Gynecology, University of Texas, Galveston.
3:00 p. m. Shock in Medical Conditions, Physiology and Treatment—Roy Turner, Associate Professor of Medicine, Tulane University, New Orleans.
4:00 p. m. Intra-abdominal Complications of Appendicitis—Howard Mahorner, M. D., Assistant Professor of Surgery, Tulane University, New Orleans.

LIBRARY NOTES

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Requests for packages should be addressed "Library, State Medical Association of Texas, 1404 W. El Paso Street, Fort Worth, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Only one package may be borrowed at a time, and packages are allowed to remain in the hands of the borrower for 14 days.

PACKAGE SERVICE

Packages were mailed from the Library of the State Medical Association during March to the following:

Dr. Boyd D. Alexander, Waco—*Allergy, caused by insects* (12 articles).

Dr. H. A. Hinman, New Braunfels—*Snakes, bites* (10 articles).

Major Thurman A. Kinder, Camp Hulen—*Osteomyelitis* (34 articles).

Dr. J. T. Hutchinson, Lubbock—*Deafness* (30 articles).

Dr. J. T. Krueger, Lubbock—*Ovary, cysts* (28 articles).

Dr. J. C. May, Perryton—*Esophagus, varix* (10 articles).

Dr. A. C. Scott, Jr., Temple—(1 journal).

Dr. A. L. Borchardt, Vernon—*Gallbladder, cancer* (13 articles).

Dr. Earl Gaston, Falfurrias—*Nutrition* (6 articles).

Dr. W. B. Reeves, Greenville—*Maternity, morbidity and mortality* (36 articles).

Dr. J. H. Vaughan, Amarillo—*Gynecology, radiotherapy in* (13 articles).

Dr. E. T. Morris, San Benito—*Sulfanilamide and Sulfanilamide Derivatives* (36 articles).

Dr. Philipp Rosenheim, Corpus Christi—*Spine* (17 articles).

Sister Jane Frances, San Antonio—*Medicine, socialized* (10 articles).

Dr. E. F. Stroud, Corpus Christi—*Sinuses, Nasal, diseases* (30 articles).

Dr. D. P. Jones, Plainview—*Spirochetosis, bronchopulmonary* (14 articles).

Dr. M. H. Glover, Wichita Falls—*Contracture, Dupuytren's* (7 articles).
Dr. G. E. Brereton, Dallas—*Surgery, postoperative complications* (12 articles).
Houston Academy of Medicine, Houston—(1 journal).
Miss Oleta Thornton, Wichita Falls—(1 book).
Dr. Wm. M. Gambrell, Austin—*Syphilis, therapy* (7 articles).
Dr. Thomas E. Cook, Dallas—*Nasopharynx, cancer* (19 articles).
Dr. J. J. Muirhead, Vernon—*Leukocytes, count* (8 articles).
Dr. J. E. Smith, Weatherford—*Typhus* (21 articles).
Dr. R. G. Johnson, Newgulf—*Syphilis, serodiagnosis* (8 articles).
Dr. M. C. Carlisle, Waco—*Death, sudden* (5 articles).
Dr. H. B. Eisenstadt, Port Arthur—*Breast, Paget's disease* (9 articles); *Osteitis, deformans* (18 articles).
Dr. Harbert Davenport, Jr., Camp Hulen—*Snakes and Spiders* (21 articles).
Dr. O. R. Lasater, Ballinger—*Food, poisoning* (9 articles).
Dr. Heinrich Lamm, La Feria—*Needles* (4 articles); *Tattooing* (1 article).
Dr. S. D. Coleman, Navasota—*Cancer Films.*
Dr. G. Turner Moller, Corpus Christi—*Kidneys, wounds and injuries* (15 articles).
Dr. L. L. Edwards, San Marcos—*Splanchnoptosis* (8 articles).
Miss Annette Fox, Denton—*Medicine, socialized* (7 articles).
Dr. A. H. Lancaster, Knoxville, Tenn.—*Medicine, socialized* (12 articles).
Dr. G. V. Pazdral, Somerville—*Phenolphthalein and Derivatives, toxicity* (9 articles).
Dr. J. P. Gibson, Abilene—*Undulant Fever* (26 articles).
Dr. W. S. Rhode, Colorado City—*Thrombo-Angiitis, obliterans* (24 articles).
Dr. O. F. Harzke, Comfort—*Pruritus, ani and vulvae* (22 articles).
Dr. W. Ehrhardt, Fairbanks—*Sex, frigidity* (8 articles).
Dr. R. T. Wilson, Austin—*Roentgenology* (9 articles).
Dr. Wayne V. Ramsey, Abilene—*Fallopian Tubes, roentgenography* (12 articles).
Dr. Robt. H. McCarty, Lubbock—*Arrhythmia* (17 articles).
Dr. Ralph Bowen, Houston—*Asthma, in infants and children* (18 articles).
Dr. D. Roach, Amarillo—*Blood Pressure, high* (22 articles).
Dr. W. E. Ryan, Midland—*Blood Sugar, hypoglycemia* (16 articles).
Dr. C. H. Mims, Mission (1 book).
Dr. Hubert Seale, Abilene—*Hearing, tests* (24 articles).
Dr. A. J. Hinman, New Braunfels—*Child Welfare* (16 articles).
Dr. N. H. Price, Lamesa—*Raynaud's Disease* (17 articles).
Dr. L. C. Feener, Harlingen—*Rheumatism* (8 articles).
Dr. Leo Villareal, El Paso—*Lungs, surgery* (13 articles).

Accessions

Mathis Van Nort & Company, Dallas—Rosser: Doctors and Doctors, Wise and Otherwise.
Chedney Press, New Work—Josephson: Merchants In Medicine.
C. V. Mosby Company, St. Louis—Cleckley: The Mask of Sanity.
Williams & Wilkins, Baltimore—Eddy and Dalldorf: The Avitaminoses.

Summary

Reprints received, 1,016	Local users, 34
Journals received, 155	Borrowers by mail, 50
Items consulted, 97	Packages mailed out, 52
Items taken out, 139	Items mailed out, 706

Total items consulted and loaned, 935.

NEWS

The Vernon Clinic-Hospital held its annual open staff meeting February 27, at the Vernon Clinic. Dinner was served to forty-three physicians, representing twelve cities in Texas and Oklahoma.

Dr. A. C. Rogers, chief of staff, presided over a scientific session.

Scientific papers presented included a paper by Dr. Robert Hargraves, Wichita Falls, "Goiter and Its Management," and by Dr. William Powers, Wichita Falls, "Hemorrhage of the Upper Gastro-intestinal Tract and Its Management." A clinical case was presented by Dr. Otto Juhl, Jr., Vernon.

Bethania Hospital, Wichita Falls, Enlarged.—A new addition to the Bethania Hospital is planned at an approximate cost of $50,000, exclusive of equipment, states the Wichita Falls *Times*. Two new floors will increase by twenty-five the number of patient's rooms, provide new operating rooms, surgical supply and equipment rooms. The first of the new floors will be devoted to the treatment of surgical cases and the second will house the operating and surgical supply rooms. The third floor, on which are now operating rooms and surgical supply rooms, will be devoted exclusively to obstetric cases and the nursery. The hospital is operated by the Sisters of the Holy Family of Nazareth. Plans for the added facilities have been approved by the executive committee of the hospital, composed of Drs. B. R. Collins, Robert Hargraves, J. A. Little, C. H. Bishop, J. E. Kanatser, J. A. Heymann and G. T. Singleton.

The Texas State Hospital Association met February 27 and 28, and March 1, at the Adolphus Hotel, Dallas, with a registration of 1,066, the largest in the history of the Association. Meeting conjointly with the Hospital Association were the Association of Medical Record Librarians of Texas, Texas Association of Nurse Anesthetists, Texas State Association of Occupational Therapists, and Texas Chapter of the American Physiotherapy Association.

Officers of the Texas Hospital Association elected for the encuing year were: President, Dr. E. M. Dunstan, administrator, Parkland Hospital, Dallas; first vice-president, Sister Antonio, assistant administrator of St. Paul's Hospital, Dallas; second vice-president, George Buis, Austin; third vice-president, John C. Crimen, El Paso; and treasurer, Miss Eva Wallace, Fort Worth.

The American Academy of Physical Medicine will hold its nineteenth annual meeting and scientific session, April 28-30, in New York with headquarters at the Hotel Pennsylvania. Lectures, symposiums, clinical papers, motion pictures and exhibits will be presented. Clinics will be held at the Medical Center, New York Orthopedic Hospital, Post Graduate Hospital, and the Skin and Cancer Hospital. There will be an evening session at the Academy of Medicine building and a banquet at the Hotel Pennsylvania. Members of the medical profession and those of related interests are invited to attend the scientific program. There will be no registration fee. Inquiries concerning the meeting should be addressed to Dr. Herman A. Osgood, 144 Commonwealth Avenue, Boston, Massachusetts.

Regional Meeting of the American Academy of Pediatrics.—Region II of the American Academy of Pediatrics will meet April 24 and 25, in Richmond, Virginia.

The morning session of April 24, will be devoted to a round table discussion of the Mental Health of the Child as Related to National Defense, with Dr. Horton Casparis, professor of pediatrics, Vanderbilt University School of Medicine, as chairman. The afternoon session of the first day will be devoted to a round table discussion of the subject of Nutrition of the Child as Related to National Defense, with Dr. Frederick F. Tisdall, associate professor of pediatrics, University of Toronto, as chairman.

On the morning of April 25, Dr. George Marshall Lyon of Huntington, W. Virginia, will deliver an address on Food Contaminations and Poisons. Following this address will be a round table discussion on Communicable Diseases and Their Relations to the Child During National Defense, with Dr. Wilburt C. Davison, professor of pediatrics, and dean, Duke University School of Medicine, as chairman. The afternoon of April 25 will be devoted to the business session.

A Child's Clinic building will be constructed in McAllen by the National Youth Administration, reports the McAllen *Monitor*. The building will include waiting rooms, two examining rooms, a large ward, a minor surgery room, and the dental and eye, ear, nose and throat offices. All furniture for the building will be made by boys in the N. Y. A. wood and metal shop at McAllen. The clinic will serve indigent children.

The Children's Clinic has been in operation in McAllen since April, 1940, and has been served by twenty McAllen dentists and physicians who have given an average of two hours each week of their time without cost to about 2,150 children. Since April, 1940, twelve smallpox vaccinations, sixteen typhoid immunizations, sixty-two diphtheria immunizations, eight Schick tests, thirty-six tuberculin tests, forty-four dental treatments, forty-seven roentgen examinations, and forty-two Wassermann tests have been made. The sum of $282.00 has been spent on medicines. Funds for the construction of the new building were raised by popular subscription.

The Dallas County Medical Plan, which was put into effect in July, 1940, has improved the health of participating employees, caused a decrease in sick absentees and resulted in increased efficiency, according to Dr. George A. Schenewerk, one of the directors. The plan was started with 487 employees of the Ford Motor Company in July, 1940, and now has 1,120 participating workers. Of doctor's fees paid out in the six months' period 40.66 per cent was for surgery in the hospital and in doctor's offices. Medical attention fees amounted to 39.54 per cent of expenses and were for 339 office visits, 45 home visits, and 153 hospital visits. Fees were paid to 160 different physicians. There was a decrease of 85 per cent in lost time because of sickness as compared with the previous six months' period in spite of a severe influenza epidemic during the six months covered by the experimental plan. Employers like the plan because it benefits health of the employees; employees like it because it permits them to secure good medical care without going into debt and spending savings; and doctors like it because of the business-like method with which they are compensated for services, asserts Dr. Schenewerk.

Dr. David W. Carter is president and Dr. Everett C. Fox is secretary. Directors are Orison McDonald, Drs. Curtice Rosser, Ozro T. Woods, John Young, Guy T. Denton, Sr., Homer Donald, and George Schenewerk.—*Dallas News.*

American Association of Obstetricians, Gynecologists and Abdominal Surgeons Foundation Award.—An award of $150, known as "The Foundation Prize," will be made by the American Association of Obstetricians, Gynecologists and Abdominal Surgeons at the annual meeting of that Association for the best manuscript, which must be presented in person by the successful contestant at the annual meeting. "Eligible contestants shall include only (a) interns, residents, or graduate students in obstetrics, gynecology or abdominal surgery, and (b) physicians (with an M. D. degree) who are actively practicing or teaching obstetrics, gynecology or abdominal surgery." Manuscripts must be limited to 5,000 words. Three copies of all manuscripts and illustrations entered in a given year must be in the hands of the secretary, Dr. James R. Bloss, 418 Eleventh Street, Huntington, W. Virginia, before June 1. Manuscripts must be presented under a nom-de-plume, which shall in no way indicate the author's identity to the secretary of the Association, together with a sealed envelope bearing the nom-de-plume and containing a card showing the name and address of the contestant. Other details concerning the award may be secured from the secretary.

American Board of Obstetrics and Gynecology Examination.—The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted at Cleveland, Ohio, May 28 to June 2, inclusive, prior to the opening of the annual meeting of the American Medical Association in that city. Prospective candidates should request the new application forms together with information regarding board requirements from the secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

The American Public Health Association will hold its seventieth annual meeting at Atlantic City, New Jersey. Sessions will be held in the Convention Hall and residence headquarters will be the Hotel Traymore. Related organizations meeting with the American Public Health Association include the American School Health Association, the International Society of Medical Health Officers, the Association of Women in Public Health, the Conference of State Sanitary Engineers, the Conference of Municipal Public Health Engineers, and the Conference of State Provincial Public Health Laboratory Directors.

Personals

Dr. Lewis Barbato, formerly in private practice in Houston, has returned to the Galveston State Psychopathic Hospital as superintendent of that institution.

Dr. M. H. Jensen is director of the new Gulf Health Department, El Campo. The department embraces the five counties of Wharton, Jackson, Matagorda, Victoria, and Calhoun. Plans are being formulated for the establishment of a venereal disease clinic and tuberculosis clinic in Wharton County.

Dr. L. B. Outlar was recently reappointed health officer of Wharton County for the years 1941 and 1942.

Dr. R. D. Holt of Meridian has returned from postgraduate study in Rochester, Minnesota.—*Meridian Tribune.*

Dr. John W. Brown, city health director of Houston for the past four years, was unanimously recommended for reappointment to that office by the Houston board of health recently, advises the Houston *Post.*

Dr. T. R. Butts, Annona, was appointed health officer for Red River County recently, informs the Clarksville *Times.*

Dr. Ray Cockrell, Baird, was recently re-elected health officer of Callahan County, advises the Cross Plains *Review.*

MARRIAGES

Dr. Claude D. Winborn of Brownwood, to Miss Norma Rosalie Wells of Seattle, Washington, in Dallas, February 15, 1941.

SOCIETY NEWS

Bexar County Society

February 6, 1941

(Reported by W. W. Bondurant, Jr., Secretary)

Observations on Hypertension—T. G. Glass and N. D. Buie, Marlin.
Round Table Discussion of State Medical Association Affairs—N. D. Buie, President-elect, State Medical Association, Marlin.

Bexar County Medical Society met February 6, in the Medical Library Building, San Antonio, with thirty-five members and three visitors present. Frank N. Haggard, president, presided. At the request of the president, members stood for one minute in silent reverence for recently deceased members of the Society: Drs. Charles D. Dixon, Wesley D. Hicks, Frank W. Sorell and Samuel L. Reveley.

W. J. Johnson, section chairman for the evening, presented the scientific program as given above.

OBSERVATIONS ON HYPERTENSION (T. G. Glass and N. D. Buie).—Dr. Buie defined hypertension and gave a concise discussion of its etiology, occurrence and pathologic changes. Lantern slides were shown of ocular fundi and kidneys in cases of hypertension. Prognosis was discussed. Dr. Glass in discussing treatment grouped under surgical measures such procedures as removal of adrenal tumors; splanchnic denervation, which gives relief of symptoms of hypertension in 22 per cent of cases; and removal of a diseased kidney.

The medical treatment includes such measures as rest, the institution of a proper diet, and moderation in exercises, with elimination of golf and polo. Walking is best. Drug treatment includes the use of drugs that cause vasodilatation, glandular medication, anti-pressure substances. Toxic substances such as tobacco and alcohol should be eliminated. Physiotherapy, hydrotherapy, psychotherapy, and massage are helpful. Hypertensive patients are benefited by a change from daily routine.

N. D. Buie led a round table discussion of State Medical Association affairs, in which he stated that the medical profession is not in too great danger of socialized medicine. Personally he opposes medical insurance and he does not think insurance is a business in which the medical profession should enter.

W. B. Russ stated that at the beginning of the century, doctors were impotent politically. After they began to take an interest in politics they bettered their medical status and the public health. Medicine has been socialized since the beginning. Social service has always been rendered by physicians. The cost of medical care is made high principally by the cost of new equipment, drugs and technical services.

A. A. Brown stated that we are living in a world of changes. The medical profession is facing a problem and should get together with so-called politicians and strike a happy medium in the solving of this problem. It may be true that there are persons who cannot get a doctor.

John H. Burleson asserted that medical care costs more now than before but so does everything else. There is need for medical politicians and every physician should interest himself in politics. Dr. Burleson stated that he is discouraged by the attitude of younger physicians. He fears that a lot of the younger physicians would like to be regimented, believing that it is an easy way to practice.

R. H. Crockett stated that medical care costs considerably more than formerly, but that, also, it is far better than formerly.

Jack Watts expressed the opinion that the greatest fault of the medical profession is that it has wrangled and talked among itself and doesn't keep the public properly informed on essential facts connected with medical care.

O. J. Potthast asserted that specialists are rarely needed; the general practitioner as a rule renders just as effective services.

Other Proceedings.—President Haggard appointed the following committee to assist the Bexar County unit of the Woman's Field Army of the American Society for the Control of Cancer: A. O. Severence, chairman; Edith M. Bonnet, Minnie C. O'Brien, J. L. Pipkin, Milton Davis, and Dudley Jackson.

Conn L. Milburn of the public health committee, read in full the agreement entered into between the Council on Medical Economics of the State Medical Association and the National Youth Administration, regarding medical service for clients of the N. Y. A. It was pointed out that the agreement applies only to youths employed in the non-scholastic section of the N. Y. A.; that all agreements for such medical service shall be between the N. Y. A. and the county medical societies having jurisdiction in their respective communities; that each youth employee or his parent shall have choice of physician and, conversely, each physician shall have the privilege of saying whether or not he wishes to participate in the service; that compensation for participating physicians, shall, in principle, be the average remuneration for similar services in private practice of patients in average financial conditions in the locality in which the physician resides; that the unit of compensation for regular services shall be $3.00 per hour, and that special services shall be provided by a retainer fee, and so forth.

Denton County Society

(Reported by E. C. Chiasson, Secretary)

Denton County Medical Society at a recent meeting elected the following officers to serve during 1941: President, J. H. Allen, Justin; vice-president, E. A. Taylor, Denton; secretary-treasurer, E. C. Chiasson, Denton; member, board of censors, Rebecca Evans, Denton; delegate, M. L. Holland, Denton, and alternate delegate, A. E. Wyss, Denton.

Grayson County Society

February 11, 1941

(Reported by George K. Stephens, Secretary)

Diagnosis and Treatment of Carcinoma of the Cervix Uteri—R. P. O'Bannon, Fort Worth.
Rational Estrogenic Therapy—T. H. Funk, Fort Worth.

Grayson County Medical Society met February 11, at the Grayson Hotel, Sherman, with sixteen members present. The scientific program as given above was carried out.

The paper of Dr. O'Bannon was discussed by Herman Klapproth and Arthur Gleckler.

Other Proceedings.—C. D. Strother gave the report of the committee in charge of the Farm Security Administration medical care plan. It was stated that bills are being received from physicians in the county not members of the Society, and the F. S. A. wanted to know what to do with regard to the payment of such bills. It was voted that the Society could not hold itself responsible for the approval of bills for other than members of the Society.

Arthur Gleckler, chairman of the Denison Dam medical plan, and the agent in charge, gave a report of the manner in which that plan is working. The bills being received for treatment of employees are about equal to the amount in the fund. The present poor membership is due to bad working conditions but should improve. Details of expenses and method of payment of accounts were discussed. A proposed contract that had been worked out with the employees of the Interstate was presented by Mr.

Voris and approved by the Society. The committee was instructed to handle all details with reference to the Denison Dam and Interstate plans of medical care.

Hardin-Tyler Counties Society

February 11, 1941

(Reported by Alvin Waller, Secretary)

Chemical Dermatitis—W. A. Smith, Beaumont.
Treatment of Ununited Fractures—George B. Stephenson, Beaumont.

Hardin-Tyler Counties Medical Society met February 11, 1941, at the Carika Hotel, Kountze, with five members and two visitors present. Watt Barclay, president, presided and the scientific program as given above was carried out.

Harris County Society

January 29, 1941

(Reported by Edward T. Smith, Secretary)

Harris County Medical Society held a regular business meeting January 29, 1941, with fifty-one members present. John H. Wootters, president, presided.

The secretary read the minutes of meetings of the executive committee.

A suggestion by E. L. Goar that the executive committee make a report with recommendations in lieu of minutes of meetings was approved by the Society.

The Society voted to send Dr. P. H. Cronin to Washington, D. C., as its representative at the trial of the U. S. A. vs. A. M. A., *et al.*, on motion of A. T. Talley, following a discussion of the matter by E. L. Goar, E. W. Bertner, E. W. Griffey and P. R. Stalnaker.

The matter of expenses in connection with the trial was discussed by E. W. Bertner and F. J. Slataper.

R. F. Bonham gave the report of the board of censors, which was approved. It was voted to include the name of Dr. Elva A. Wright on the list of honorary members.

L. L. D. Tuttle gave the report of the board of medical economics.

Reports were received from the following committees: *Adjudication*, William Lapat; *legislation and public health*, read by the secretary and approved; *military affairs*, E. L. Goar, approved; *speakers bureau*, read by the secretary and approved; *military affairs*, E. L. Goar, approved; reference committee of Tri-cities Welfare League, F. J. Slataper.

The report of the treasurer was read by the secretary and approved.

A communication from Mayor Pickett of Houston, asking the Society to select twelve or fourteen members to serve on the board of health was read. President Wootters appointed a nominating committee composed of E. L. Goar, R. H. Bonham, and Frank J. Iiams to select nominees for this purpose. The following physicians were selected by the committee and approved by the Society to be nominated to the Mayor for service on the board of health: E. W. Bertner, Walter A. Coole, Mylie E. Durham, Joe B. Foster, Charles S. Gates, John K. Glen, J. T. Oliver, Charles B. Reece, Judson L. Taylor, Clyde M. Warner, John H. Wootters, Ernest Wright, J. Allen Kyle and John M. Trible.

New Members.—C. R. Waters was elected to membership. W. D. Oliver and L. H. Sherrill, new members, were introduced by the president.

Resolutions.—Resolutions on the death of Dr. J. F. Mathews were read by Bert B. Smith.

Hunt-Rockwall-Rains Counties Society

February 11, 1941

(Reported by M. L. Wilbanks, Secretary)

Prenatal Care; Third Stage of Labor; Placenta Praevia and Placenta Abruptio—Wayne T. Robinson, Dallas.
Nutrition; Infant Feeding, and Diarrhea—Chester E. Kitchens, Texarkana.

Hunt-Rockwall-Rains Counties Medical Society sponsored a refresher course presented under the auspices of the State Health Department in coöperation with the State Medical Association, at Greenville, February 11. The lecturers were Dr. Wayne T. Robinson of Dallas, who spoke on obstetrical subjects as given above, and Dr. Chester E. Kitchens of Texarkana, who spoke on pediatric subjects. The meeting began at 9:00 a. m. and continued until the business session of the Society in the evening at which W. M. Dickens, president, presided.

Other Proceedings.—Joe Becton gave a report of the committee on military affairs.

Henry C. Wilson, reporting on the health program, stated that the x-ray clinic had made the first group of x-ray films in tuberculous suspects on January 27 and 28, and a recheck would be made on February 12 and 13.

President Dickens made a brief announcement of a meeting of the program committee with chairman of other committees and officers of the Society at the home of M. L. Wilbanks, Greenville.

The resignation of W. M. Dickens as a member of the board of censors was accepted, and H. M. Bradford elected for the unexpired term of one year.

E. P. Goode, chairman of the legislative committee, presented a communication that had been addressed to Representatives G. C. Morris and Leonard Carlton, expressing opposition to H. B. No. 189, the bill proposing to license chiropractors in Texas, now pending in a subcommittee in the House.

On motion of S. D. Whitten, the report of the committee was adopted and the communication was signed by members of the Society.

Jefferson County Society

March 10, 1941

(Reported by W. J. Graber, Secretary)

Treatment of Congenital Syphilis (lantern slides)—W. P. Killingsworth, Port Arthur.

Jefferson County Medical Society met in regular session, March 10, at the Hotel Dieu Hospital, Beaumont, with T. A. Fears, president, presiding. The scientific program as given above was carried out.

The presentation of Dr. Killingsworth was discussed by W. D. Brown, J. A. Bybee, T. A. Tumbleson, W. J. Graber, H. B. Williford, W. P. Robert, J. M. Smith and S. J. Lewis.

President Fears asked for the opinion of the Society on the proposal to turn the Jefferson County Tuberculosis Hospital over to the State of Texas.

Following discussion, J. W. Long moved that the Jefferson County Medical Society go on record as being opposed to turning the Tuberculosis Hospital over to the State, which motion was seconded by T. L. Pecora and unanimously carried.

Mr. C. M. McCarver, representative of the National Youth Administration, presented an outline of the proposed medical service for the National Youth Administration in Texas, the terms of service and remuneration having been agreed to by the National Youth Administration and the State Medical Association of Texas.

T. C. Walker moved that the Jefferson County Medical Society go on record as being willing to cooperate with the National Youth Administration in furnishing medical care to these youths, which motion was seconded by L. C. Powell and unanimously carried. The matter was referred to the committee on public relations.

The State Pneumonia Control Program was referred to the public relations committee for consideration.

W. J. Graber, on nomination of C. M. White, was elected to fill the unexpired term of G. L. Butler as secretary-treasurer, Dr. Butler having been called into active military service.

Resolutions of condolence were adopted on the death of Dr. Sam J. Pate.

T. A. Tumbleson asked that all who had not filled in the A. M. A. questionnaires on medical preparedness to do so at their earliest convenience.

A motion picture on "Studies in Human Fertility," was shown by the Ortho Products, Inc.

Tarrant County Society

February 18, 1941

(Reported by W. P. Higgins, Secretary)

The Duration of Immunity of Diphtheria—E. G. Schwarz, Fort Worth.
Treatment of Acute Glomerulonephritis—C. O. Terrell, Jr., Fort Worth.

Tarrant County Medical Society met February 18, with fifty members and six visitors present. The scientific program as given above was carried out.

The paper of E. G. Schwarz was discussed by C. O. Terrell, Jr., R. B. Wolford, T. C. Terrell, and J. W. Eschenbrenner.

The paper of C. O. Terrell, Jr., was discussed by A. Keller Doss.

Resolutions.—Resolutions of sympathy were adopted on the death of Dr. C. O. Hook, of Fort Worth, father of Dr. James H. Hook.

J. D. Covert, member of the legislative committee, reported for that committee. He urged that each member of the Society contact the Senator and Representatives of the Society in the State Legislature in regard to public health legislation.

Attendance prizes, a cosmetic kit and waffle iron, were won by May Owen and Harold J. Shelley, respectively.

Following adjournment a motion picture, "Regional Anesthesia," was shown through the courtesy of the Winthrop Chemical Company, Inc.

March 4, 1941

Statistics on Nose and Throat Infections—Rex Z. Howard, Fort Worth.
Hydatid Mole with Resulting Chorio-Carcinoma—Theron H. Funk, Fort Worth.

Tarrant County Medical Society met March 4, with fifty-three members and four visitors present.

The scientific program as given above was carried out and the papers were discussed by May Owen, R. H. Needham, Gatlin Mitchell, John J. Andujar, Harold J. Shelley and Jack Furman.

Other Proceedings.—Bert C. Ball requested that a report be made by the medical economics committee with regard to the plan of collecting accounts referred to that committee at the meeting on February 4. President Gough stated that an effort would be made to have a report from that committee at the next meeting.

Harold M. Williams, acting city health director, spoke in regard to baby health centers being established in the city by the city health department for the care of indigents. Six such health centers would be established, and it was desired to have a part time pediatrician for each center who would receive some compensation from the State Health Department for this service. The plan had received the approval of the pediatricians and the public health advisory committee, and the city health department wanted the endorsement of the Society. Dr. Williams moved that the Society endorse the program as outlined, which motion was seconded by Craig Munter.

R. G. Baker asked for further explanation in regard to the plan and stated that the Society had been endorsing too many plans without knowing anything about them.

Tom Bond suggested that pediatricians and members of the City-County Hospital staff discuss the matter.

Following discussion by A. Keller Doss, C. O. Terrell, Jr., T. C. Terrell, L. O. Godley and Charles H. McCollum, Tom B. Bond offered a substitute motion to the effect that action on this plan be deferred until it had been passed on by the staff of the City-County Hospital.

Following further explantion by Dr. Williams and discussion by E. M. Wier, Craig Munter, L. H. Reeves, R. B. Wolford, Nelson L. Dunn and T. L. Goodman, the Society voted to adopt the motion of Dr. Williams endorsing the plan of the city health department to provide for health centers for eligible indigents who have cards from the City-County Hospital and who would be cared for by pediatricians.

Taylor-Jones Counties Society

(Reported by Sol B. Estes, Secretary)

Election of Officers.—At a recent meeting of the Taylor-Jones Counties Medical Society the following officers were elected for 1941: President, J. Frank Clark; vice-president, Donald McDonald; secretary-treasurer, Sol B. Estes; delegate, Frank Hodges, and members, board of censors, Jack Estes and L. F. Johnson.

Wharton-Jackson Counties Society

(Reported by William M. Blair, Secretary)

Election of Officers.—At its December meeting the Wharton-Jackson Counties Medical Society elected the following officers for 1941: President, L. B. Outlar, Wharton; vice-president, J. M. Bauknight, Ganado, and secretary-treasurer, William M. Blair, Wharton.

January 14, 1941

Pneumonia—Charles Stone, Professor of Medicine, University of Texas, Galveston.
Management of the Commoner Allergic Problems by the General Practitioner—Ralph Bowen, Houston.

Wharton-Jackson Counties Medical Society met January 14, in joint session with the Fort Bend Counties Medical Society at the Sylvan Club in Rosenberg, with thirty physicians attending. The scientific program as given above was carried out.

PNEUMONIA (Charles Stone).—The author stated that he was appearing at this meeting, not as a professor of medicine, but as a member of the committee appointed by the State Health Department for the study of pneumonia. The State Health Department has been allotted $22,000, to make a study of pneumonia in Texas. The following hospitals are coöperating in the study: Parkland, Dallas; Robert B. Green, San Antonio; Jeff Davis, Houston; City-County, Fort Worth, and John Sealy, Galveston.

Pneumonia is third in the list of causes of death in Texas. Prior to the development of the new serum treatment and the introduction of sulfanilamide and its derivatives there were 3,700 deaths in Texas annually. In 1939 in John Sealy Hospital the mortality of pneumonia cases was one out of every fifty. It was at this time that the sulfanilamide derivatives came into use and it has been estimated that the pneumonia death rate in the United States, which has been 150,000 annually, will be reduced to between 30,000 and 40,000. In Texas the death rate in pneumonia with the proper use of sulfanilamide derivatives and serum therapy should be cut to 800. Methods of investigation and treatment of pneumonia were discussed. Almost of equal value with the development of newer drugs has been the perfection of a new typing method by which the various pneumococci can be identified and classified in a few moments. The facility of this procedure is of great importance because the earlier treatment is instituted the greater the possibility of recovery of the patient.

In certain cases, combined serum therapy with sulfapyridine or sulfathiazole is indicated, particularly in patients over 50, and in patients who have other complicating diseases such as cardiac dysfunction. On certification from the physician in charge that a patient is indigent the State Health Department furnishes sera or drugs, and if necessary, both.

Ralph Bowen gave an interesting talk on allergic problems, of practical value to the general practitioner. It was pointed out that allergic manifestations are seen even in the newborn baby. In many cases the baby who has colic, diarrhea and vomiting and for whom there is a constant change of milk formula, may be allergic. The great increase in allergic patients may be due to the fewer number of breast-fed babies or to the great number of food substitutes developed by commercial companies to which babies may develop allergic reactions. It is also possible that better diagnostic procedure is responsible for the greater recognition of allergic diseases than formerly. In discussing allergic conditions in adults, special attention was given to asthma and various types of skin eruptions. The address was illustrated by case histories and lantern slides. Special emphasis was placed upon the value of the history in determining the allergic factor.

February 11, 1941

Treatment of Cancer—Ozro T. Woods, Dallas.
Injuries to the Urinary Tract—Ralph V. St. John, Corpus Christi.

Wharton-Jackson Counties Medical Society met February 11, at the Plaza Hotel, Wharton, with eighteen physicians present. Following a dinner, the scientific program as given above was carried out.

THE TREATMENT OF CANCER (Ozro T. Woods).—The educational program of the Woman's Field Army for the Control of Cancer was complimented highly by Dr. Woods, who asserted that cancer would only be controlled in proportion to the extent to which the public is informed concerning its ravages and how it may be prevented and cured. The treatment of cancer cannot be stereotyped. Each case must be studied, evaluated and treated with the method best suited to it. The Memorial Hospital, New York, is now pioneering in cancer research. Cancer clinics are being established throughout the United States. Specialized methods of treatment of cancer in various parts of the body were discussed. Statistics were given and emphasis placed on the importance of early diagnosis.

INJURIES TO THE URINARY TRACT (Ralph V. St. John).—The advances in civilization with the great increase in automobile travel, airplanes and industrial growth is responsible for the great increase in injuries of the urinary tract. During the ten year period from 1919 to 1929, only twenty-two cases of traumatic injury were seen in Bellevue Hospital, New York, whereas in the past two years in a small private hospital in Corpus Christi, almost twice as many such cases have been observed. The diagnosis and treatment of urinary tract injuries was reviewed.

Other Proceedings.—M. H. Jensen, director of the Gulf Health Department, discussed the organization of a venereal disease clinic and the Society voted in favor of the establishment of such a clinic, leaving the place and personnel to be decided upon later.

Mr. Gasky, representing the N. Y. A., presented a plan for the medical care of clients of the National Youth Administration.

Seventh District Society

February 11, 1941

(Reported by A. L. Nanny, Marble Falls, Secretary)

The Pathology of Tumors of the Eye—Major Elbert DeCoursey, Station Hospital, Fort Sam Houston.
The Advantages and Limitations of the Electrocardiogram—J. H. Herndon, Dallas.
Sulfathiazole as a Therapeutic Agent—Charles B. Shuey, Dallas.

The Seventh District Medical Society met February 11, at the Driskill Hotel, Austin, for its annual dinner and election of officers. Fifty members were present. The scientific program as given above was carried out.

THE PATHOLOGY OF TUMORS OF THE EYE (Major Elbert DeCoursey).—The subject was presented in open forum. Tissue sections of tumors, with statistical figures, and summary of the interpretations, were shown by lantern sildes. The most common tumors of the eye are the benign melanomas. Malignant tumors include melanosarcomas, leukosarcomas, interfascicular endotheliomas, melanocarcinoma, and so forth. Melanomas always arise in the uveal tract, which is the distinguishing point between benign and malignant types.

The paper of Dr. Herndon was illustrated with lantern slides. The indications for electrocardiographic studies were given and what the electrocardiogram does not indicate was pointed out.

The paper of Charles B. Shuey was illustrated with lantern slides and included not only a discussion of sulfathiazole therapy but its comparison as a therapeutic agent with the other sulfonamide preparations.

New Officers.—The following officers were elected for the ensuing year: President, Lee E. Edens, Austin; vice-president, L. L. Leberman, San Marcos, and secretary-treasurer, J. Gordon Bryson, Bastrop.

CHANGES OF ADDRESS

Dr. William C. Barksdale, from Panhandle to Borger.

Dr. H. L. Bartlett, from Houston to Fort Brown, Brownsville.

Dr. Luise C. Brandenstein, from Dallas to McKinney.

Dr. John E. Brooking, from Goldthwaite to Slaton.

Dr. J. M. Brown, from Marlin to San Francisco, California.

Dr. Roy H. Cantrell, from Dallas to Brady.

Dr. William G. Carnathan, from Carthage to Henderson.

Dr. M. A. Childers, from San Antonio to Camp Wolters, Mineral Wells.

Dr. Joel L. Cochran, from San Antonio to Camp Wolters, Mineral Wells.

Dr. Herbert G. Cull, from Houston to Camp Bowie, Brownwood.

Dr. G. A. Creel, from Arp to Kermit.

Dr. J. W. Davis, from O'Donnell to Columbus, Georgia.

Dr. A. L. Delaney, from Fort Crockett to Camp Wallace, Hitchcock.

Dr. F. Fred Freeland, from Sulphur Springs to Dallas.

Dr. B. H. Fultz, from Falfurrias to Chapel Hill.

Dr. Atticus J. Gill, from Dallas to Durham, North Carolina.

Dr. William H. Girdner, from Abernathy to Hamlin.

Dr. J. H. Grammer, from Fort Worth to Camp Bowie, Brownwood.

Dr. J. E. Green, from Kosse to San Antonio.

Dr. Harvey B. Henry, from Luling to Austin.

Dr. John P. Howser, from Jefferson Barracks, Missouri, to Alexandria, Louisiana.

Dr. Charles W. Kelley, from Texarkana to Brownwood.

Dr. James A. Levins, from Lufkin to Velasco.

Dr. R. P. Lockey, from Bessmay to Camp Sealy.

Dr. Dan H. Loving, from Amarillo to Camp Bowie, Brownwood.

Dr. David M. Marcley, from Amarillo to U. S. Navy Air Corps, Jacksonville, Florida.

Dr. John L. Matthews, from San Antonio to Brownwood.

Dr. W. Grady Mitchell, from San Angelo to Naval Air Base, Corpus Christi.

Dr. J. N. Mitchell, from Dallas to Gladewater.

Dr. G. J. Nordenbrock, from Mt. Pleasant to St. Mary's Ohio.

Dr. Frank C. Payne, from Rising Star to Breckenridge.

Dr. Gardner D. Phelps, from Chicago to Rockford, Illinois.

Dr. Jerry C. Price, from Boston to New York City.

Dr. F. R. Roach, from Queen City to Marshall.

Dr. Emil P. Reed, from Fort Sam Houston to Fort Stotsenburg, Philippine Islands.

Dr. George F. Rozelle, from Dallas to Fort Worth.

Dr. Gus Schreiber, Jr., from Sherman to Dallas.

Dr. L. M. Shipp, from Henderson to Philadelphia, Pennsylvania.

Dr. Walter A. Sievers, from Gonzales to Camp Grant, Illinois.

Dr. Lewis Silver, from Dallas to Veterans Hospital, Waco.

Dr. F. D. Sims, from Abbott to CCC Camp, Clarkdale, Arizona.

Dr. J. A. Smith, from Yukon, Oklahoma to CCC Camp, Bartlett.

Dr. John M. Smith, from Port Neches to Camp Barkeley, Abilene.

Dr. John E. Talley, from Hamilton to Camp Barkeley, Abilene.

Dr. Harold R. Thomas, from Dallas to Army Hospital, Brownwood.

Dr. Henry G. Wallace, from Borger to Fort Bliss.

Dr. Edward T. Wolf, from Houston to Fort Ringgold, Rio Grande City.

Dr. Carleton C. Wright, from Memphis, Tennessee, to Dallas.

Dr. L. A. Zink, from Pecos to Brownwood.

AUXILIARY NOTES

Officers of the Woman's Auxiliary to the State Medical Association of Texas: President, Mrs. William Hibbitts, Texarkana; honorary life president, Mrs. A. C. Scott, Sr., Temple; president-elect, Mrs. S. F. Harrington, Dallas; first vice-president, Mrs. H. Leslie Moore, Dallas; second vice-president, Mrs. A. E. Moon, Temple; third vice-president, Mrs. A. B. Pumphrey, Fort Worth; fourth vice-president, Mrs. Joe B. Foster, Houston; recording secretary, Mrs. Walter A. Minsch, Kerrville; publicity secretary, Mrs. W. F. Armstrong, Fort Worth; treasurer, Mrs. J. Frank Clark, Abilene; parliamentarian, Mrs. J. W. Tottenham, Brownwood; and corresponding secretary, Mrs. Ralph Cross, Texarkana.

Notice.—The subscription cost of the *Bulletin* of the Woman's Auxiliary to the American Medical Association, issued quarterly, is $1.00 annually. Every Auxiliary member should have it. It contains interesting, informative material about activities of the Woman's Auxiliary throughout the United States. Subscriptions should be sent to Mrs. F. F. Kirby, State Auxiliary Bulletin Chairman, 2801 Sanger Avenue, Waco, Texas. Subscribe now.

WELCOME

On behalf behalf of the Tarrant County Medical Auxiliary, I wish to extend to each and every doctor's wife in Texas a most hearty and cordial invitation to come to Fort Worth, May 12-15, to the annual meeting of the State Medical Association. You may be assured that a real welcome awaits you. We hope that you will take advantage of this opportunity and come—and by your presence assure a happy and successful meeting.

MRS. J. F. MCVEIGH,
President, Tarrant County
Medical Auxiliary.

SOUTH TEXAS DISTRICT AUXILIARY MEETING

The Spring Meeting of the Woman's Auxiliary to the South Texas District Society will be held April 17 and 18 in Galveston.

The meeting will be held at the Galvez Hotel, with the president, Mrs. Robt. A. Hasskarl of Brenham, in charge. A business session starting at 10:00 a. m. April 17, in the Ballroom, will be followed by a luncheon at 12:30 p. m. in the Terrace Dining Room.

Mrs. Wm. Hibbitts, State president, will make the address at the morning session.

AUXILIARY NEWS

Bexar County Auxiliary held a Valentine luncheon, February 14, at the Gunter Hotel, San Antonio.

Mrs. Ralph Jackson gave the invocation and Mrs. Max Johnson presided at the business session.

Mrs. Omer Roan, musical chairman for the day, presented Misses Monette Shaw and Cecil Kern, accompanied by Mrs. Vera Harper, in a program of Valentine music.

Mrs. I. T. Cutter introduced Dr. David Jacobson, guest speaker, whose subject was, "Juvenile Delinquency in Bexar County."

Members of the Auxiliary brought samples of baby food and medicine which will be distributed to charitable institutions by the philanthropic committee.

Mrs. Max Johnson reported that as health chairman of the City Federation of Women's Clubs, she had presented the following program for the meeting of that organization February 20: An address on "Cancer Control" by Dr. Dudley Jackson, followed by the showing of the motion picture film, "I choose to Live."

At the business meeting, the following officers were elected and are to be installed at the May meeting: President, Mrs. Charles Holshauser; first vice-president, Mrs. A. G. Cowles; second vice-president, Mrs. J. T. Hariston; third vice-president, Mrs. W. W. Maxwell; fourth vice-president, Mrs. J. L. Pridgen; recording secretary, Mrs. Charles McGehee; corresponding secretary, Mrs. William A. Reily; treasurer, Mrs. B. H. Passmore; auditor, Mrs. Edgar McPeak; publicity, Mrs. I. T. Cutter, and historian, Mrs. A. F. Clark.—Mrs. John Worrell Winter.

Big Bend Counties Auxiliary held a called meeting January 14, at the home of Mrs. L. A. Lavanture.

The constitution and by-laws read for the third time were duly adopted.

Communications were received from Mrs. Leslie Moore of Dallas, State Chairman of organization, and Mrs. Ralph Homan, El Paso, First District council woman.

The following officers were re-elected for the ensuing year: President, Mrs. L. A. Lavanture, Marfa; secretary and corresponding secretary, Mrs. J. C. Darracott, Marfa; and treasurer, Mrs. Joel Wright, Alpine.

Following the business session, a social hour was enjoyed, and refreshments of cake and tea were served by Mrs. Blackwell. Mrs. Malone Hill poured.

Big Bend Counties Auxiliary met February 11, with the County Medical Society for dinner in the Paisano Hotel, Marfa, with Dr. and Mrs. L. A. Lavanture as host and hostess. After a turkey dinner, members of the Auxiliary held a separate business and social meeting.

The Auxiliary voted not to send funds to the State Auxiliary for the present year, since the organization is too young and small to give financial aid elsewhere. It was voted to invite Mrs. R. B. Homan, El Paso, District One council woman, and Mrs. William Hibbitts, Texarkana, State President, to attend the next meeting.

A congratulatory letter was read from Mrs. J. W. Tottenham, Brownwood, State Parliamentarian.

After the business session some of the members played bridge and others joined their husbands in the County Medical Society meeting.

Brown-Mills-San Saba Counties Auxiliary held a dinner meeting recently at the Hotel Brownwood, Brownwood, with Mrs. H. L. Lobstein, president, presiding.

Mrs. A. A. Ross, Lockhart, a major in the Woman's Field Army for the Control of Cancer, gave an interesting and informative talk on cancer control.

Mrs. J. W. Tottenham has accepted an appointment as a captain for Brown County in the Woman's Field Army and will conduct a campaign in Brown County during April, which has been designated as cancer control month.

President Mrs. Lobstein was elected an alternate delegate to the annual meeting of the State Auxiliary in Fort Worth, May 12-14.

Dallas County Auxiliary held its annual guest day meeting, March 12, 1941, with a luncheon at the Dallas Country Club, honoring Mrs. V. F. Holcomb, Charleston, W. Virginia, president of the National Auxiliary, and Mrs. William Hibbits, Texarkana, president of the State Auxiliary.

Mrs. E. M. Dunstan introduced Mrs. V. Y. Rejebian, who reviewed Robert Sherwood's "There Shall Be No Night."

Mrs. V. E. Holcomb and Mrs. William Hibbitts were honored at a tea given by Mrs. Ramsay Moore, president of the Dallas County Auxiliary, and Mrs. S. F. Harrington, president-elect of the State Auxiliary, at the home of Mrs. Moore.

Mrs. Frank Carman, president-elect of the Dallas County Auxiliary, received the guests, who were the past state presidents, members of the state executive board, district council women, vice chairmen of committees, and members of the 1940 executive board.

Presiding at the silver service were Mesdames H. Leslie Moore, J. H. Marshall, O. M. Marchman and S. M. Hill.

Others in the house party were members of the official board of the Dallas Auxiliary, including Mesdames B. J. Berger, James T. Montgomery, E. M. Dunstan, John V. Goode, John E. Ashby, C. O. Patterson, W. B. Carrell, Robert L. Moore, U. P. Hackney, L. S. Thompson and Guy Witt.

Falls County Auxiliary met February 8, in the home of Mrs. A. C. Hornbeck, Marlin, with eight members present.

Plans were made to invite Mrs. S. H. Watson, Waxahachie, former State President, to be the guest speaker at the March meeting.

Mrs. J. I. Collier, Hygeia chairman, reported that two new subscriptions had been secured.

Plans were discussed for making contributions to the Marlin Public Library and to honor Falls County doctors on "Doctor's Day," in February.

Falls County Auxiliary held a regular business meeting March 7, in the home of Mrs. Evelyn Rice Hutchins, president, Marlin, with eight members present.

A discussion of the Bundles to Britain and the British Relief project was had.

Letters on medical legislative measures were read and referred to the legislative chairman, Mrs. J. B. Barnett, who will consult Dr. A. E. von Tobel for suggestions as to how the Auxiliary may help.

The committee to prepare the program for Doctor's Day reported that plans had not been completed for that meeting, and it was voted to postpone the meeting until later in the spring.

Mrs. E. P. Hutchings was appointed to ascertain charitable contributions by members of the Auxiliary for the report to be made by the president at the State Auxiliary meeting.

Requests for donations to the Memorial Fund and the Student Loan Fund were made.

Gray-Wheeler Counties Auxiliary met recently in the home of Mrs. Calvin Jones, Pampa, with eleven members present.

Mrs. R. W. Webb was elected president and Mrs. J. B. Johnson was elected secretary, to serve during the ensuing year.

Jefferson County Auxiliary held its March meeting in the form of a luncheon at the Goodhue Hotel, Port Arthur, with twenty-two members present. A St. Patrick's motif was featured in the luncheon appointments.

Mrs. I. T. Young presided over the business session and named the following nominating committee to report at the April meeting: Mesdames B. J. Fett and James Makins, Port Arthur and Mesdames Walter D. Brown and L. H. Ledbetter, Beaumont.

Mrs. F. J. Beyt directed an interesting "quiz program."

Hostesses for the affair were Mesdames C. E. Painton, C. W. Boring and W. M. Cobode.—Mrs. M. E. Suehs.

Kerr-Kendall-Gillespie-Bandera Counties Auxiliary observed President's Day with a luncheon, February 20, 1941, at the home of Mrs. L. L. Keyser, Fredericksburg, honoring Mrs. William Hibbitts, Texarkana, State President.

Mrs. Victor Keidel introduced Mrs. Hibbitts, who spoke on "Changing Values," describing changes in the medical profession and in women's club work, and stressing particularly the work that should be done in these times of stress along lines of defense and keeping up the health standard of the country.

Mrs. Scott Applewhite, San Antonio, spoke briefly on the "Memorial Fund," urging that it be given particular attention through the coming year.

Winners of the essay contest sponsored by the Auxiliary read their papers on "Increasing the Span of Life," after which the prize awards were made.

Mrs. S. E. Thompson, Hygeia chairman, reported that forty-one subscriptions had been secured.

Mrs. J. C. Herrick, membership chairman, reported that two new members had been added last month.

One physical examination was reported and seven members reported having read the JOURNAL.

Hostesses for the luncheon were Mesdames H. G. Pfieffer, J. J. Hanus, L. W. Feller, and L. L. Keyser.

Kerr-Kendall-Bandera-Gillespie Counties Auxiliary held a business meeting in the home of Mrs. Walter Minsch, Kerrville, March 7.

It was voted to send $5.00 to the Student Loan Fund and $10.00 to the Memorial Fund.

The work of the Kerr-Kendall-Gillespie-Bandera Hygeia committee won honorable mention in the national Hygeia contest.

New officers were elected for the ensuing year as follows: President, Mrs. P. J. Domingues, Kerrville; first vice-president, Mrs. J. J. Hanus, Fredericksburg; second vice-president, Mrs. F. B. Brewer, Legion; third vice-president, Mrs. J. H. Pennington, Legion; recording and corresponding secretary, Mrs. W. A. Minsch, Kerrville; treasurer, Mrs. W. E. Gregg, Kerrville; parliamentarian, Mrs. A. B. Williamson, Fredericksburg; historian, Mrs. L. L. Keyser, Fredericksburg; publicity secretary, Mrs. J. C. Herrick, Kerrville.—Miss A. L. Peden, Secretary.

McLennan County Auxiliary honored members of the McLennan County Medical Society at a dinner at the Roosevelt Hotel, Waco, February, attended by forty-six members of the Auxiliary and their guests, including husbands of members.

Mrs. Ernest Johnson, president, presided, and introduced Dr. and Mrs. W. T. Gooch, guests, and the new members of the McLennan County Medical Society and their wives, as follows: Dr. and Mrs. H. M. Anspach, Dr. and Mrs. R. J. Hanks, and Dr. and Mrs. R. D. Holt. Sixteen physicians from the Veterans hospital were also introduced.

Mrs. I. W. Jenkins gave the invocation.

Vocal selections were given by Miss Billie Guynes and Bill Shriner of Baylor University, accompanied by Hudson Howell.

Mrs. C. H. Brooks, in charge of the program, presented John Seehy, guest speaker, who discussed conditions facing America.

Mesdames C. H. Brooks, M. C. Carlisle, W. G. Trice, and Brian Aynesworth were in charge of arrangements.

Tarrant County Auxiliary held its March 14, meeting in the form of a coffee at the Colonial Hills Club, Fort Worth, with fifty members and guests present.

Officers for the ensuing year were elected as follows: President, Mrs. C. O. Terrell; president-elect, Mrs. W. G. Phillips; first vice-president, Mrs. George R. Enloe; second vice-president, Mrs. R. H. Gough; recording secretary, Mrs. W. F. Parsons; corresponding secretary, Mrs. Thomas M. Jeter; treasurer, Mrs. Samuel Jagoda; publicity chairman, Mrs. Joe R. Wise; parliamentarian, Mrs. John Eschenbrenner; historian, Mrs. C. P. Schenck, and executive board members, Mrs. Porter Brown and Mrs. D. N. Matheson.

Hostesses for the meeting were Mesdames A. Antweil, Bert Ball, L. O. Godley, I. P. Barrett, J. H. Wooten, and H. J. Jackson.

Mrs. William Hibbitts, Texarkana, State President, was the honor guest at a luncheon at the Fort Worth Club, March 12. Mrs. Hibbitts was in Fort Worth in connection with arrangements for the forthcoming annual meeting of the State Auxiliary. Headquarters for the Auxiliary will be at the Blackstone Hotel.

Tom Green Eight County Auxiliary met March 3, at the Massie Clubhouse, San Angelo, with fifteen members and one guest present.

Blanche McKee, student, read her winnng health essay entitled, "Increasng the Span of Life," which won the local prize of $5.00 offered by the Auxiliary. The essay will be entered in the state contest.

Mrs. Harlan Horney, president, presided over the business session.

The report of the nominating committee given by Mrs. R. L. Powers, was accepted, and the following officers were elected for 1941: President, Mrs. J. A. Bunyard; first vice-president, Mrs. Charles R. Potts; second vice-President, Mrs. Victor E. Schulze; secretary, Mrs. Robert M. Finks; treasurer, Mrs. Carl A. Kunath; parliamentarian, Mrs. G. L. Lewis; publicity secretary, Mrs. Lewis K. Tester (re-elected).

Mrs. J. Valton Sessums gave the treasurer's report.

Mesdames D. D. Wall and I. G. Rushton announced Dr. Ellen Fury would be the speaker for the April 4 meeting of the City Council of Parents and Teachers. Dr. Fury's subject will be cancer.

Mrs. C. T. Womack general chairman of the style revue sponsored by the City Federation of Women's Clubs, February 28 announced that the Auxiliary was one of the five clubs contributing 100 per cent on ticket sales.

Mrs. R. M. Finks of the project committee discussed the possibility of sponsoring a spring "Follies" program to raise money.

Hostesses for the social hour were Mesdames W. E. Schulkey, D. D. Wall and C. T. Womack.—Mrs. Lewis K. Tester.

Travis County Auxiliary honored Mrs. William Hibbitts, Texarkana, State President, February 25, 1941, with a luncheon in the Texas Federation Women's Club, Austin, with sixty-six members and guests present. Mrs. Hibbitts spoke on the subject, "The Medical Auxiliary versus Other Organizations."—Mrs. J. M. Coleman.

Washington County Auxiliary observed "Dental Day" with a meeting at the St. Anthony Hotel, Brenham, February 24. Mrs. Arthur Becker, vice-president, presided in the absence of Mrs. C. E. Southern, president.

Mrs. Sam Tobin read a paper from a dental journal on "The Role of Nitrous Oxide Oxygen Anesthesia in the Office of the General Practitioner."

The Red Cross project to be sponsored by the Auxiliary was discussed, and a committee appointed to investigate the duties of the Auxiliary in connection with the Red Cross.

Mrs. M. F. Bledsoe, an honorary life member of the Jefferson County Auxiliary, died January 13, 1941, in Port Arthur.

Mrs. Annie Louise Boerner of Austin, Texas, died February 7, 1941, at her home.

BOOK NOTES

[1]**Obstetrics in General Practice.** By J. P. Greenhill, B. S., M. D., F. A. C. S., Professor of Obstetrics and Gynecology, Loyola University Medical School, Chicago; Professor of Gynecology, Cook County Graduate School of Medicine. Cloth, 448 pages. Price, $3.00. The Year Book Publishers, Inc., Chicago, 1940.

The author states in the preface that the book is based on twenty-two years of experience, and that the views given on obstetrical problems are mostly his own. Fortunately, they square with what is considered the most approved in obstetric practice. Like his Office Gynecology, the volume is practical and gives the practitioner a small concise book in which the most common and important obstetrical conditions are described. The author does not, as he states, deal with controversial discussions, but states his own views on these conditions. He lists few references. The chapter on antepartum care is especially good. The practitioner is given the answers to many questions about which the pregnant woman will quiz him during gestation. This is followed by minor ailments which are so common during pregnancy. The book continues in this clear, practical manner.

Greenhill has condensed a wealth of material in one volume. It is recommended to all practitioners because the data are well presented in a concise and simplified form. The experienced obstetrician will garner many good points by reading it.

[2]**Bacillary and Rickettsial Infections, Acute and Chronic.** By William H. Holmes, Professor of Medicine, Northwestern University Medical School; Chairman, Department of Medicine, Passavant Memorial Hospital, Chicago. Cloth, 676 pages. Price, $6.00. The Macmillan Company, New York, 1940.

As stated by the title of this book, the volume is written primarily as a textbook. The author, professor of medicine in Northwestern University Medical School, with an experience of thirty years of medical practice and twenty-seven years of undergraduate teaching, is exceedingly well qualified to write a book of this type.

The style is easy and written as if from a smooth and fluent lecturer and not a conglomeration of collected facts. One is impressed with the ease with which opposing theories are summed up and presented, leaving one a well rounded out picture of the problem rather than a mere presentation of theories.

[1]Reviewed by Herman W. Johnson, M. D., Houston, Texas.
[2]Reviewed by L. C. Carter, M. D., Marlin, Texas.

The volume deals only with the bacillary and rickettsial infections, leaving the virus diseases and the infections of coccal, spirochetal, and protozoal etiology for subsequent presentation. Each disease is considered as to its history, etiology, pathology, clinical course and treatment. Much stress is laid on the history of the disease showing that our present knowledge represents the cumulative experience of many generations of priests, physicians, physicists and philosophers. This is done to give the student a better insight to the obligation he assumes on becoming a member of the profession, to increase his interest in the disease, and with the hope of encouraging further research.

The author is to be complimented upon the completeness of the volume, the fullness of the technique in treatment and the technique in diagnostic procedure. This book would be an addition to any internist's library and is to be recommended as a textbook.

[3]**The 1940 Yearbook of Public Health.** Edited by J. C. Geiger, M. D., Dr. P. H., Director of Public Health, City and County of San Francisco; Clinical Professor of Epidemiology, University of California. Cloth, 560 pages. Price, $3.00. The Year Book Publishers, Inc., Chicago, 1940.

Various public health articles and findings appearing in major medical and public health journals during the year 1940 have been compressed between the covers of this volume. Dr. J. C. Geiger has edited the selected articles and studies in various public health fields for the convenience of the reader. Dr. Geiger's scope is commendable in that he has coverd every phase of public health.

The compilation of abstracts will serve as a very handy reference guide to public health workers and others interested in the field and is of a very real value to the profession. The abstracts are not lengthy, but provide succinct information. The editor has frequently interpolated comments of his own following specific articles.

The Yearbook has an obvious use in providing public health workers with a guide to articles published during 1940 on specific subjects. It is suggested that the reader consult the articles for a resume and then procure the originals for more thorough and lengthy perusal of articles which prove most valuable.

The tone of the original articles has been carefully preserved in the abstracts, and one of the interesting features of any compilation such as this Yearbook is the juxtaposition of various points of view as presented by public health authorities in the various articles.

It is noteworthy, for instance, that the points of view expressed in the articles in the administrative section are not necessarily applicable to locales other than those of the author's experience. The articles are indexed for easy reference.

The Yearbook contains a series of abstracts on communicable diseases, tuberculosis, poliomyelitis, malaria, venereal diseases, food and drug, nutrition, housing, statistics, laboratories, industrial hygiene, administration, medical care, maternal care, health education, child hygiene, and dental hygiene.

[4]**The Diagnosis and Treatment of Cardiovascular Disease.** Edited by William D. Stroud, B. S., M. D., F. A. C. P. Professor of Cardiology, University of Pennsylvania Graduate School of Medicine; President of the Americal Heart Association. Cloth, 1,825 pages. Two-volume set, fully illustrated. Price, per set, $18.00. F. A. Davis Company, Philadelphia, 1940.

[3]Reviewed by Geo. W. Cox, M. D., State Health Officer, Austin, Texas.

[4]Reviewed by Edward H. Schwab, M. D., Department of Medicine, University of Texas, Galveston, Texas.

This two-volume contribution to the literature on diseases of the cardiovascular system represents the combined efforts of fifty-six contributors under the editorship of Dr. W. D. Stroud, Professor of Cardiology, University of Pennsylvania Graduate School of Medicine, Philadelphia. The list of authors includes the names of the majority of eminent American cardiologists.

The field of diseases of the heart and blood vessels is completely covered in sixty-two chapters. Certain chapters stand out and deserve special comment. The subject of electrocardiography is exceptionally well covered in the two chapters: "The Form of the Electrocardiograms," by Wilson, and "Electrocardiography," by Bellet and McMillan. The chapter entitled, "Normal Blood Pressure and Its Physiologic Variation," by Edgar V. Allen is unsurpassed by anything in American literature. The section on "Heart Sounds" by Wolferth and Margolies is an outstanding contribution. The subject of the so-called cardiac neuroses is inadequately discussed.

In a work of this type a certain amount of repetition and overlapping necessarily occurs. However, in this instance, it appears to be excessive and definitely impairs the value of the contribution. For example, the various phases in the management of congestive heart failure are covered in five or six different chapters. Similarly, several chapters must be perused to cover the subject of coronary occlusion and angina pectoris. Discordant opinions as to the efficacy of therapeutic procedures are occasionaly encountered. This adverse and justifiable criticism could have been partially overcome by adequate cross editing of the various sections. The format and printing are exceptionally fine. The student of cardiovascular diseases will welcome this splendid addition to the literature in this field.

DEATHS

Dr. James Madison Britton of El Paso, Texas, died February 9, 1941, at his home, of diabetic coma.

DR. J. M. BRITTON

Dr. Britton was born December 30, 1866, in Lineville, Alabama, the son of John Albert and Martha Anna Hubbard Britton. His academic education was received in preparatory schools in Lineville and Montgomery, Alabama, and Ashland College of that state. His medical education was obtained in the University of Nashville, Nashville, Tennessee, from which he was graduated in 1899. In accordance with the custom of the times, he had practiced medicine in Scranton, Texas, prior to his graduation. He re-

turned to Scranton after his graduation, where he was in general practice until 1910. At this time he took special work in eye, ear, nose and throat in Dallas and in New York City. He then located in Cisco, Texas, limiting his work to diseases of the eye, ear, nose and throat. In 1917, he removed to El Paso, which was his home for the remainder of his professional life.

Dr. Britton was a member throughout his professional life of the State Medical Association and American Medical Association, through the Eastland County Medical Society while living at Scranton and Cisco, and the El Paso County Medical Society after his removal to El Paso, until his retirement about two years ago. He was a constant student of medicine, devoted to his profession. He was a Universalist, and a member of the Masonic order. He was a former member of the El Paso Rotary Club and Country Club. During his active career, he gave freely of his time and talents to the civic affairs of the communities in which he lived. His life was one of service to his fellow man.

Dr. Britton is survived by his wife, the former Miss Eleanor Saidie McKnabb of El Paso, to whom he was married May 1, 1937, in Las Cruces, New Mexico. He is also survived by two sisters, Mrs. J. M. Morgan, Raton, New Mexico, and Mrs. Marion Reece, Bakersfield, California, and one brother, O. L. Britton, Toledo, Ohio.

Dr. William Milton Dodson of Woodsboro, Texas, died suddenly February 2, 1941, of heart disease, while on a professional call.

DR. W. M. DODSON

Dr. Dodson was born July 18, 1868, in Concho County, Texas, the son of John Freeman and Allie Cummings Dodson. His medical education was obtained in the medical department of the University of Texas, Galveston, from which he was graduated in 1913. He began the practice of medicine in McFaddin, Victoria County, where he remained for two years. He then located in Woodsboro, Refugio County, where he had been in active practice until his death.

Dr. Dodson was a member continuously in good standing of the State Medical Association and American Medical Association, from 1914 until his death, first through the Victoria-Calhoun Counties Medical Society and after his removal to Woodsboro through the San Patricio-Aransas-Refugio Counties Medical Society. He was also a member of the Southern Medical Association. He served as president of the San Patricio-Aransas-Refugio Counties Medical Society in 1933. Dr. Dodson founded the Woodsboro Hospital, which he successfully operated until failing health caused him to give up its operation. After the organization of the Refugio County Hospital, he served as president of its first medical staff. He had also served Refugio County as health officer. Dr. Dodson's professional career embraced all stages of practice from that of a pioneer physician on horseback, who had to reach many of his patients by swimming swollen streams, before the building of good roads, until the modern era of hospital practice. Through that period he had given unstintedly of his ability as a physician to his community without thought of fee or reward. He was devoted to his profession. Withal, he was successful financially. As a citizen he had served his community well. He was its first mayor and guided the destiny of the town for more than a decade. He was one of the organizers and for years president of the First National Bank of Woodsboro and was vice-president of the institution at the time of his death. He was a past president of his local school board, and of the Woodsboro Lions Club. He was a past master of the Masonic Blue Lodge, a Scottish and York Rite Mason, a Patron of the order of Eastern Star, and a member of the Shrine. He was a member of the Methodist Church. Dr. Dodson will be sorely missed by a community to which he had contributed so abundantly in professional and civic service.

Dr. Dodson was married March 21, 1915, to Miss Mary Jane Billingsley of McFadden, Texas. He is survived by his wife; one son, John Morse Dodson, Sabinal, Texas; one daughter, Miss Pattie May Dodson, a senior taking pre-medic work in the University of Texas, Austin; his mother, Mrs. J. F. Dodson, Paint Rock; four sisters, Mrs. A. R. Holman, Mrs. Editha Pierce and Mrs. Rama Kinard, all of Paint Rock, and Mrs. Lela Tiller, El Paso; and one brother, Floyd C. Dodson, San Angelo.

Dr. Edward Field Hamm of Clarendon, Texas, died February 15, 1941, at his home, of coronary occlusion.

DR. E. F. HAMM

Dr. Hamm was born January 2, 1876, at Bloomington, Illinois, the son of Edward and Lucy Field Hamm. His academic education was obtained in the Southwestern Academy, in Arkansas. He taught school for several years prior to the study of medicine. His medical education was received in the Hospital College of Medicine, and the medical department of the Central University of Kentucky, Louisville, Kentucky, from which he graduated in 1905. After his graduation he served as house physician and surgeon at the Dale Sanatorium, Texarkana, Arkan-

sas, where he was in practice until 1909. He then located in Canadian, Texas, a little later removing to Clarendon, Texas, where he lived and practiced until 1919. From 1919 to 1939 he was in active practice at Mexia. At that time he returned to Clarendon, which was his home for the remainder of his professional life.

Dr. Hamm was a member of the State Medical Association and American Medical Association for many years through the county medical societies of his various places of residence. He served the Limestone County Medical Society as president in 1930. He had kept well abreast of scientific advancement by repeated postgraduate studies at Rochester, Minnesota, and Chicago. For many years he served as local surgeon for the Southern Pacific and Burlington-Rock Island railway companies, while residing at Mexia. He was a member of the Methodist Church, which institution he had served as a steward for many years. He was a member of the Masonic order. Dr. Hamm had many diversified talents. He was a musician; he played the piano and for many years sang in the church choir. Of scholarly attainments he spoke German, French, and was well versed in Latin and English. He was held in the highest regard by his medical associates and the clientele he served.

Dr. Hamm was married June 10, 1908 to Miss Minnie Luona Moore, Texarkana, Arkansas. His wife preceded him in death in March, 1935. He is survived by two sons, William Edward and James Robert Hamm, Houston, and three daughters, Mrs. T. B. Curry, Mt. Vernon, Illinois, and Misses Mary and Ruth Hamm, Clarendon.

He is also survived by two sisters, Mrs Cora E. Pierce, Magnolia, Arkansas, and Mrs. Robert Gatlin, Mt. Holly, Arkansas, and one brother, Frank O. Hamm, Mexia.

Dr. Charles O. Hook, of Fort Worth, Texas, died February 15, 1941, in a Fort Worth hospital, of myocardial failure, hypertension and diabetes mellitus.

Dr. Hook was born December 6, 1876, in Green Castle, Missouri. His academic education was received in the Missouri State Normal College, Kirksville, Missouri. His medical education was obtained in the Hahnemann Medical College and Hospital of Chicago in 1903. He was graduated from the Bennett Medical College of the Loyola University in 1913. He had taken postgraduate work in the Chicago Homeopathic Medical College and the Chicago Postgraduate Medical School and Hospital. Dr. Hook had practiced at LaSalle and Rockford, Illinois, before locating in Fort Worth in 1908. He had lived and practiced in Fort Worth until his last illness and death, with the exception of a period of time in 1934, when he served as house physician at the Woodman of the World Hospital for tuberculosis, San Antonio.

DR. CHARLES O. HOOK

Dr. Hook was a member continuously in good standing of the Tarrant County Medical Society, State Medical Association and American Medical Association from 1918 until his death. Dr. Hook was a highly respected physician both by his medical associates and the clientele he served. He was a member of the Phi Delta Epsilon medical fraternity. He was a member of the Christian Church, a Knights Templar Mason and a member of the Shrine. He was also a member of the Knights of Pythias. Dr. Hook's hobby was wolf and fox hunting. He served two years as president of the State Wolf and Fox Hunting Association.

Dr. Hook was married October 17, 1899, to Miss Geneva A. Skavlen, who survives him. He is also survived by a daughter, Mrs. W. E. Buchanan, Marshall; a son, Dr. James H. Hook, with whom he was associated in practice; three brothers, Drs. J. T. Hook, Loveland, Colorado; A. E. Hook, Logan, Iowa, and Henry Hook, Hutchinson, Kansas, and three sisters, Dr. Emma Price, Hutchinson, Kansas; Mrs. E. L. Jamenson, Kirksville, Missouri, and Mrs. Rebecca Sanford, Green Castle, Missouri.

Dr. Edward Eugene Ledbetter of Tioga, Texas, died February 22, 1941, in a Dallas hospital, of coronary occlusion.

DR. E. E. LEDBETTER

Dr. Ledbetter was born June 12, 1876, in Summerfield, Louisiana, the son of Macpherson B. and Nancy Ann (Calloway) Ledbetter. His academic education was received in Austin College, Sherman. His medical education was obtained in Vanderbilt University, Nashville, from which he was graduated in 1899. He began the practice of medicine at Tioga, and had been continuously in active practice in that location until his final illness and death, a period of forty-two years.

Dr. Ledbetter had been a member for many years of the Grayson County Medical Society, State Medical Association and American Medical Association and was in good standing in these organizations at the time of his death. He had also been a member of the Texas Railway Surgeons Association. He was a veteran of the Spanish-American War. He was a member of the Baptist Church, a Mason, and a member of the Woodmen of the World. Because of the fact that he was the only physician in his community he had never felt that he could leave for a vaca-

tion and the longest period he was away from his practice in forty-two years was three days. His life was given in service to his community.

Dr. Ledbetter is survived by two daughters, Mrs. J. F. Ayres and Mrs. R. C. Bearmann, both of Port Arthur; a sister, Mrs. J. L. Webb, Gainesville, and a brother, Dr. W. C. Ledbetter, Bristol.

Dr. T. M. Morgan of Childress, Texas, died February 10, 1941, of Cerebral hemorrhage.

Dr Morgan was born October 5, 1872, in Fayetteville, Arkansas, the son of Dr. W. A. and Sarah E. Morgan. His medical education was received in the University of Tennessee College of Medicine, from which he was graduated in 1900. He had later taken postgraduate work in Chicago in 1916 and 1919. He began the practice of medicine in what was then known as Indian Territory, where he remained until January 9, 1908. At this time he removed to Childress, where he had been in active practice until his death.

DR. T. M. MORGAN

Dr. Morgan was for many years a member of the Childress-Collingsworth-Hall Counties Medical Society, State Medical Association and American Medical Association and was in good standing in these organizations at the time of his death. He had operated a hospital in Childress for the past twenty-five years. He was a member of the Church of Christ, a member of the Commandery, Knights Templar, and a member of the Shrine. He was also a member of the Knights of Pythias and the Odd Fellows fraternal organizations. Dr. Morgan was a successful, capable physician, who contributed materially in charitable services to those in his community in need.

Dr. Morgan is survived by his wife, Mrs. Mable Howell, to whom he was married at Arapaho, Oklahoma in 1935; two daughters, Anne Morgan, Childress, and Mrs. Billie Parker, Lubbock; one son, Hayden Morgan, Lubbock; three sisters, Mrs. W. A. Cox, Lubbock; Mrs. W. T. Mallory, Weatherford, and Mrs. Dora Brannon, California; and a step-daughter, Mrs. Willard Henry Morton.

Dr. Wendell Heath Paige of Brownwood, Texas, died February 14, 1941.

Dr. Paige was born April 25, 1886, in Rutland, Vermont, the son of Charles Edwin and Alice Heath Paige. His medical education was received in the George Washington University, Washington, D. C., from which he was graduated in 1911. After his graduation he served an internship in the Starmont Sanitarium. He began the practice of medicine in Pittsford, later removing to Ludlow, Vermont, where he remained for two and one-half years. In 1916, he located in Brownwood, Texas, which was his home for the remainder of his professional life. During the first World War, he served in the medical corps of the United States Army, spending eleven months in France with the 144th Infantry, 36th Division, where he was awarded the Croix de Guerre for distinguished service.

Dr. Paige was a member of the Brown County Medical Society, and after its reorganization, of the Brown-Comanche-Mills-San Saba Counties Medical Society, State Medical Association, and American Medical Association continuously in good standing after his location in Brownwood. He had served both his county medical Society and the Fourth District Society as president. During his professional life he had regularly taken postgraduate work and his specialty was internal medicine. He was a Fellow of the American College of Physicians and a member of the Texas State Heart Association. He was one of the founders of the Medical Arts Hospital, Brownwood, and had served that institution as secretary-treasurer of its board of directors. He was a member of the Alpha Kappa Kappa medical fraternity.

In addition to an active professional life, Dr. Paige was accounted a civic leader of Brownwood. He was a past president of the Brownwood Kiwanis Club of which he was a charter member. He had also served as president of the Civic Advisory Council of Brownwood. He was particularly interested in the Parole Board System and had served as chairman for Brown County since its organization. He was a member of the Presbyterian Church and a Mason. Dr. Paige was held in the highest esteem by his medical associates as an ethical, competent internist. He had kept well abreast of advances of scientific medicine and had contributed many excellent papers to his county and district medical societies and the State Association. In his death Brownwood lost a physician of high attainments and a citizen of first rank.

DR. W. H. PAIGE

Dr. Paige is survived by his wife, and a stepmother, Mrs. Aaron W. Hosmer, Cavina, California.

Dr. Samuel L. Reveley of San Antonio, Texas, died February 1, 1941, of cerebral hemorrhage.

Dr. Reveley was born April 28, 1880, in El Paso, Arkansas, the son of Hugh and Cora Richardson Reveley. His academic education was received in Quitman College and Hendrix College, Conway, Arkansas. His medical education was obtained in the University of Arkansas School of Medicine, from which he was graduated in 1915. He was assistant professor of pathology in the medical department of the University of Arkansas, from 1915 to 1918. He served as bacteriologist for the Arkansas State De-

partment of Health from 1915 to 1917. He served as pathologist for the State Hospital for Nervous Diseases while engaged in private practice in Little Rock, Arkansas, from 1917 to 1918. He then removed to Marion, Texas, where he lived and practiced from 1918 to 1920. At this time he removed to San Antonio, where he was in active practice until his death.

Dr. Reveley was a member of the State Medical Association and American Medical Association for several years after his location in Texas, first through the Comal-Guadalupe Counties Medical Society while living at Marion and through the Bexar County Medical Society after his removal to San Antonio, and was in good standing at the time of his death. He was a member of the International Post-Graduate Medical Assembly. He was devoted to his profession and had worked indefatigably for a period of twenty-six years without a vacation. He gave unlimited charitable services to the needy.

DR. S. L. REVELEY

Dr. Reveley was married February 18, 1903 to Miss Sarah Ozella McCracken at Sweet Home, Arkansas. His first wife died March 7, 1924. In 1933, he was married to Mrs. Anita Ruedrich Reeves, who survives him. He is also survived by two sons and four daughters by his first marriage, as follows: Dr. James E. L. Reveley, San Antonio, and Hugh P. N. Reveley, Galveston; Mrs. J. G. McAlister, Austin; Mrs. J. B. Booth and Mrs. D. R. Faulk, San Antonio, and Mrs. R. W. Cumley, Madison, Wisconsin. He is also survived by a sister, Mrs. Minnie Hale, Scottsville, Arkansas, and two brothers, James and Joseph Reveley, Little Rock, Arkansas.

Dr. W. J. L. Roberts of Chapel Hill, Texas, died suddenly February 7, at his home of heart disease.

Dr. Roberts was born October 27, 1877, in Galveston, Texas, the son of Charles and Dorothea Roberts. His academic education was received in the public schools of Galveston and in the University of Virginia. His medical education was obtained in the medical department of the University of Texas, Galveston, from which he was graduated in 1904. Following his graduation he lived and practiced at Garwood, Texas, for nine years, Eagle Lake, for twelve years, and for the past ten years at Chapel Hill.

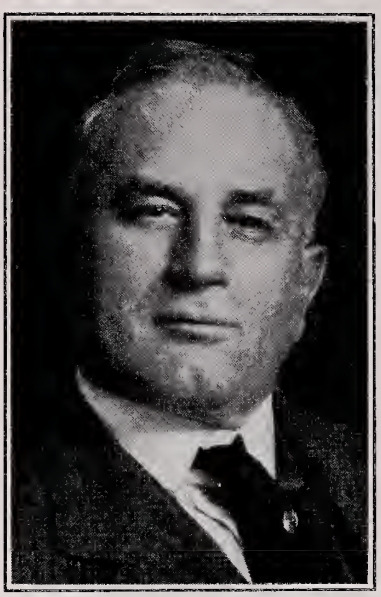
Dr. Roberts was a member of the State Medical Association and American Medical Association for many years, first through the Colorado County Medical Society and after his removal to Chapel Hill through the Washington County Medical Society. He was held in high esteem by his medical confreres and the clientele he served.

Dr. Roberts was married April 12, 1900, to Miss Bessie Fox, daughter of the late Dr. A. C. Fox of Waynesboro, Virginia. He is survived by his wife; two daughters, Mrs. W. D. Holloway, Birmingham, Alabama, and Miss Dorothy Roberts, Corpus Christi; two sons, William Roberts, Jr., Birmingham, Alabama, and Pierre Roberts, Brenham; two brothers and five sisters.

Dr. E. M. A. Sizer of Rio Hondo, Texas, died January 30, 1941, in the Valley Baptist Hospital, Harlingen, of injuries sustained in an automobile accident January 7.

Dr. Sizer was born April 15, 1867, in Rosendale, Wisconsin, the ninth son of eleven children of G. W. and Fanny Sizer. His academic education was received in the Ripon College of Wisconsin. He then attended the Chicago Homeopathic College from which he was graduated in 1894. He served his internship in the Columbus Memorial Hospital, Lincoln Park, Chicago. He lived and practiced at Fall Creek, Wisconsin, for twenty-five years. He then located at Eau Claire, Wisconsin, where he served on the staff of the Luther and Sacred Heart hospitals. In 1921 he removed to Rio Hondo, Texas. He was out of practice for two years, but resumed practice in 1923, and had been in active practice until his death.

Dr. Sizer was a member of the Eau Claire County Medical Society and Wisconsin State Medical Society from 1896 to 1922. He had served the Eau Claire County Medical Society as both president and censor. After his location in Rio Hondo he had been a member continuously in good standing of the Cameron County Medical Society and later the Cameron-Willacy Counties Medical Society, and State Medical Association from 1924 until his death. He served the Cameron - Willacy Counties Medical Society as secretary in 1935 and was vice-president of that Society at the time of his death. He was a member of the American Medical Association continuously during his forty-five years of practice. He was a member of the staff of the Valley Baptist Hospital, Harlingen. He was a member of the Presbyterian Church, a Royal Arch Mason, a Knight Templar, a member of the Shrine, and a patron of the Eastern Star. He was also a member of the Modern Woodmen of America. He had lived a full and useful life as a physician and citizen in the communities in which he had resided.



DR. E. M. A. SIZER

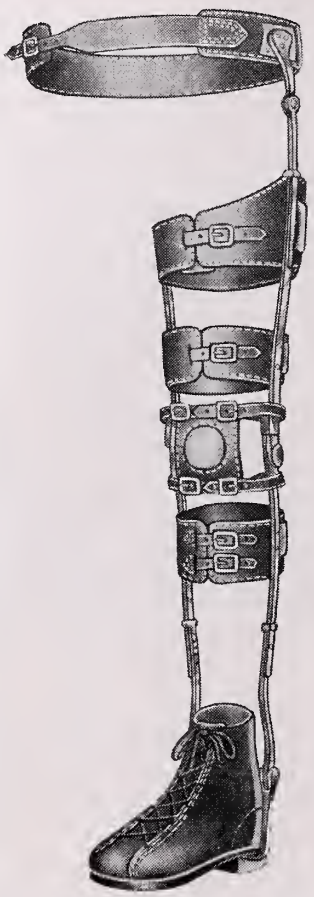
Dr. Sizer is survived by his wife; a daughter, Marybelle; a son, Frank, all of Rio Hondo; one brother, Dr. L. J. Sizer, Jackson, Michigan, and two sisters, Mrs. Helen Rogers, Chicago, and Miss Ada Sizer, Muskogee, Oklahoma.

COUNTY MEDICAL SOCIETIES ROSTER

Co. Soc.	Secretary	Address	Time of Meeting
Anderson-Houston-Leon (11)	John H. Barrett, Palestine,		1st Tues.
Angelina (10)	M. O. Gibson, Lufkin,		2d & 4th Mon.
Atascosa (5)	C. C. Shotts, Pleasanton		
Austin-Waller (9)	Otto E. Steck, Bellville,		3rd Tues. bi-mo.
Bastrop (7)	C. Martin Hoch, Smithville,		1st Tues., bi-mo.
Baylor-Knox-Haskell (13)	T. W. Williams, Haskell,		3d Tues.
Bee-Live Oak-McMullen (6)	Tom B. Reagan, Beeville,		quar.
Bell (12)	Raleigh R. Curtis, Temple,		1st Wed. bi-mo.
Bexar (5)	W. W. Bondurant, Jr., San Antonio		Every Thurs.
Bosque (12)	S. L. Witcher, Clifton,		1st Tues., qr.
Bowie (15)	Chas. A. Smith, Texarkana,		3rd Fri., mo.
Brazoria (9)	Brooks Stafford, Angleton		
Brazos-Robertson (12)	Kermit W. Fox, Bryan,		3d Tues.
Brooks-Duval-Jim Wells (6)	Thelma E. Frank, Benavides,		3d Wed., mo.
Brown-Comanche-Mills-San Saba (4)	S. W. Hughes, Brownwood,		2d Mon.
Burleson (9)	John E. Siptak, Caldwell		
Caldwell (7)	J. T. O'Banion, Luling,		2d Tues.
Cameron-Willacy (6)	Geo. R. Dashiell, Jr., Brownsville,		3rd Thurs.
Camp (15)	Joe K. Bates, Pittsburg,		2d Tues., quar.
Cass-Marion (15)	Felix Peebles, Jr., Jefferson,		2d Wed., bi-mo.
Cherokee (11)	T. H. Cobble, Rusk,		4th Tues.
Childress-Collingsworth-Hall (3)	Chas. B. Jones, Wellington,		3rd Fri.
Clay-Montague-Wise (13)	W. T. Inabnett, Decatur,		4th Thur.
Collin (14)	H. Dudley Wysong, McKinney,		2d Tues.
Coleman (4)	J. Paul Board, Santa Anna,		1st Tues., bi-mo.
Colorado (8)	J. R. Laughlin, Eagle Lake,		2d Tues., bi-mo.
Comal (5)	F. H. Kliefoth, New Braunfels,		2d Wed.
Cooke (14)	Houston Terry, Gainesville,		2d Mon.
Coryell (12)	E. E. Lowrey, Gatesville,		1st Tues., mo.
Crane-Upton-Reagan (4)	Wm. F. Birdsong, Texon		
Dallam-Hartley-Sherman-Moore (3)	V. R. Moore, Dalhart,		1st Tues.
Dallas (14)	W. W. Fowler, Dallas,		2d & 4th Thurs.
Dawson-Lynn-Terry-Gaines-Yoakum (2)	Wayne C. Hill, Tahoka,		2d Wed.
Delta (14)	C. C. Taylor, Cooper,		1st Mon.
Denton (14)	Eva Strahan, Denton,		1st Thurs.
DeWitt (8)	Herman C. Eckhardt, Yorktown,		3rd Wed.
Donley-Armstrong (3)	B. L. Jenkins, Clarendon,		Last Mon. of ea. mo.
Eastland-Callahan (13)	J. H. Caton, Eastland,		3rd Tues., bi-mo.
Ector-Midland-Martin-Howard-Andrews-Glasscock (2)	L. Alton Absher, Midland,		3d Thur.
Ellis (14)	T. G. Estes, Waxahachie,		2d Wed.
El Paso (1)	L. W. Breck, El Paso,		2d, 4th Mon.
Erath-Hood-Somervell (12)	A. G. Barsh, Stephenville,		3d Wed.
Falls (12)	A. C. Bennett, Marlin,		1st Mon.
Fannin (14)	J. M. Donaldson, Bonham,		2d Thurs.
Fayette (8)	Gene Schulze, Schulenburg,		4th Tues.
Fort Bend (9)	Charles W. Yates, Rosenberg,		1st Tues.
Freestone (11)	J. D. Davidson, Teague,		1st Tues., Apr. Oct.
Galveston (9)	T. G. Blocker, Jr., Galveston,		1st Fri., mo.
Gonzales (5)	Geo. W. Wilhite, Gonzales,		bi-mo.
Grayson (14)	Geo. K. Stephens, Whitewright,		2d Tues.
Gray-Wheeler (3)	Glenn R. Walker, Wheeler,		3d Tues., mo.
Gregg (15)	Hardy Cook, Longview,		2d Thurs.
Grimes (9)	H. L. Stewart, Navasota,		4th Thurs.
Guadalupe (5)	R. L. Knolle, Jr., Seguin,		2d Tues.
Hale-Floyd-Briscoe-Swisher (3)	J. C. Anders, Plainview,		2d Tues.
Hamilton (12)	J. E. Talley, Hamilton,		2d Tues., quar.
Hansford-Hemphill-Lipscomb-Roberts-Ochiltree (3)	G. L. Kengle, Perryton,		3d Wed.
Hardeman-Cottle-Foard-Motley (3)	A. C. Hughes, Roaring Springs		
Hardin-Tyler (10)	Alvin Waller, Woodville,		2d Tues.
Harris (9)	Edward T. Smith, Houston,		Every Wed., except June, July, August
Harrison (15)	F. V. Mondrick, Marshall,		1st Tues.
Hays-Blanco (7)	J. R. DeSteiguer, San Marcos,		1st Thurs., bi-mo.
Henderson (11)	Don Price, Athens,		1st Mon.
Hidalgo-Starr (6)	C. J. Hamme, Edinburg,		2d Thurs.
Hill (12)	J. E. Boyd, Hillsboro,		2d Fri.
Hopkins-Franklin (14)	Thos. H. Stevens, Sulphur Springs,		1st Tues.
Hunt-Rockwall-Rains (14)	M. L. Wilbanks, Greenville,		2d Tues.
Hutchinson-Carson (3)	M. M. Stephens, Borger,		1st Mon.
Jasper-Newton (10)	J. J. McGrath, Jasper,		3d Wed.
Jefferson (10)	G. L. Butler, Beaumont,		2d Mon.
Johnson (12)	R. W. Kimbro, Cleburne,		3d Tues.
Karnes-Wilson (5)	E. L. Tiner, Poth,		quar.
Kaufman (14)	R. J. Rowe, Jr., Kaufman,		1st Tues.
Kerr-Kendall-Gillespie-Bandera (5)	John Dee Jackson, Kerrville,		1st and alt. Mon.
Kimble-Mason-Menard-McCulloch (4)	Floyd McCollum, Mason,		1st Wed., quar.
Kleberg-Kenedy (6)	Dewey W. Peace, Bishop,		2d Fri.
Lamar (14)	M. A. Walker, Jr., Paris,		1st Thurs.
Lamb-Bailey-Hockley-Cochran (3)	I. T. Shotwell, Jr., Littlefield,		3d Tues.
Lampasas-Burnet-Llano (7)	Joe A. Shepperd, Burnet,		2d Wed.
LaSalle-Frio-Dimmit (5)	B. E. Pickett, Jr., Carrizo Springs,		3d Tues., qr.
Lavaca (8)	Robt. W. Williams, Shiner.		
Lee (7)	S. W. Mantzel, Giddings,		2d Tues., qr.
Liberty-Chambers (10)	E. J. Tucker, Liberty,		2d Thurs.
Limestone (12)	Lamar E. Alford, Groesbeck,		1st Tues.
Lubbock-Crosby (3)	Pauline Miller, Lubbock,		1st Tues.
Matagorda (8)	B. E. Simons, Bay City.		
McLennan (12)	M. B. Aynesworth, Waco		2d Tues.
Medina-Uvalde-Maverick-Val Verde-Edwards-Real-Kinney-Terrell-Zavala (5)	Kay B. Urban, Crystal City,		2d Fri. in April, Aug. & Dec.
Milam (12)	C. G. Brindley, Cameron,		2d Tues., qr.
Montgomery (9)	W. P. Ingrum, Conroe,		1st Tues.
Morris (15)	E. Y. Anthony, Omaha,		2d Tues., mo.
Nacogdoches (10)	Henry Tucker, Nacogdoches,		2d Wed.
Navarro (12)	C. S. Stroud, Corsicana,		1st Mon.
Nolan-Fisher-Mitchell (2)	J. K. Richardson, Sweetwater,		1st Mon.
Nueces (6)	C. J. Connor, Corpus Christi,		2d Tues., mo.
Orange (10)	F. W. Lawson, Orange,		1st Tues.
Palo Pinto-Parker (13)	E. F. Yeager, Mineral Wells,		1st Mon.
Panola (10)	Lynn C. Hooker, Carthage		
Pecos-Jeff Davis-Presidio-Brewster (1)	Joel E. Wright, Alpine,		2d Tues.
Polk-San Jacinto (9)	Roy A. Olive, Livingston,		3d Thurs.
Potter (3)	J. B. White, Amarillo,		2d Mon.
Randall-Deaf Smith-Parmer-Castro-Oldham (3)	Robt. P. Jarrett, Canyon,		1st Fri.
Red River (15)	Melvin Marx, Jr., Clarksville,		1st Mon.
Reeves-Ward-Winkler-Loving-Culberson-Hudspeth (1)	Sam C. Harrell, Monahans		
Runnels (4)	O. H. Chandler, Ballinger,		2d & 4th Tues.
Rusk (10)	C. A. Dawson, Minden,		3d Tues.
San Patricio-Aransas-Refugio (6)	Walter Noble, Aransas Pass,		bi-mo.
Scurry-Dickens-Kent-Garza-Borden-King-Stonewall (2)	H. P. Redwine, Snyder,		1st Mon., quar.
Shelby-San Augustine-Sabine (10)	W. H. Warren, Center,		2d Wed.
Smith (11)	C. E. Willingham, Tyler,		2d Thurs.
Stephens-Shackelford-Throckmorton (13)	D. J. R. Youngblood, Breckenridge,		1st Thurs., mo.
Tarrant (13)	W. P. Higgins, Jr., Fort Worth,		1st & 3d Tues.
Taylor-Jones (2)	Donald H. McDonald, Abilene,		2d Tues.
Titus (15)	Wm. A. Taylor, Mt. Pleasant,		2d Tues.
Tom Green-Coke-Crockett-Concho-Irion-Sterling-Sutton-Schleicher (4)	R. L. Powers, San Angelo,		1st Mon.
Travis (7)	Truman Morris, Austin,		1st Tues.
Upshur (15)	J. L. Fenlaw, Gilmer,		2d Tues.
Van Zandt (14)	B. B. Brandon, Edgewood,		1st Fri.
Victoria-Calhoun-Goliad (8)	Jos. R. Story, Victoria,		4th Thurs.
Walker-Madison (9)	Robt. Thomason, Huntsville,		2d Tues., bi-mo.
Washington (9)	Nelson L. Schiller, Brenham,		3d Thurs.
Webb-Zapata-Jim Hogg (6)	M. E. Malakoff, Laredo,		1st Mon.
Wharton-Jackson (8)	H. D. Giddings, El Campo,		2d Tues.
Wichita (13)	R. L. Nelson, Wichita Falls,		2d Tues., mo.
Wilbarger (13)	B. W. Miller, Vernon,		3d Mon.
Williamson (7)	J. L. Jopling, Taylor,		2d Tues., mo.
Wood (14)	Robt. H. Coleman, Mineola,		2d Tues., mo.
Young-Jack-Archer (13)	J. P. Lovett, Olney,		2d Tues., bi-mo.

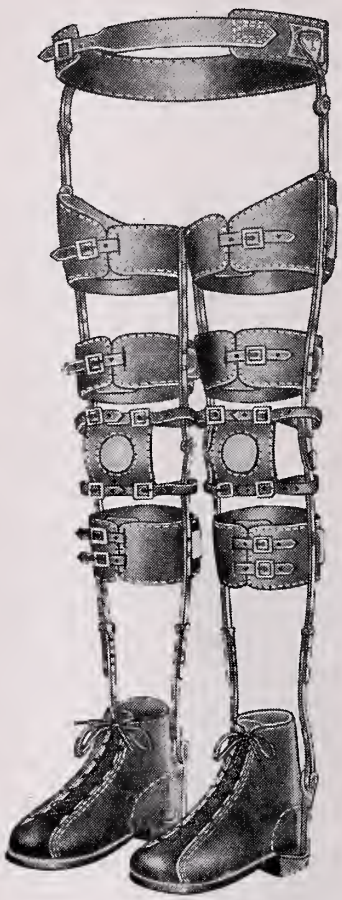
NOTE—The numeral indicates the district in which the society is located. *President.

LONG LEG BRACES



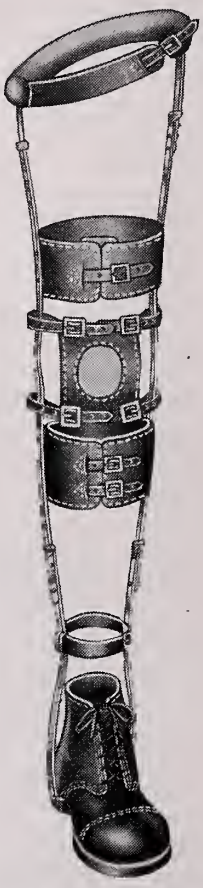
WITH HIP JOINTS AND PELVIC BAND

State whether lock at knee or free motion is required. Brace is adjustable above and below knee. Measurements required: Length from sole of bare foot to ankle, knee, groin trochanters and crest of ilium. Circumference around ankle, calf, above calf, knee joint, above knee, mid-thigh, thigh, perineum, trochanters and crest of ilium. Make outline of limb on paper and enclose with order and patient's shoe.



WITH HIP JOINTS AND PELVIC BAND

State whether lock at knee or free motion is required. Braces are adjustable above and below knee. Measurements required: Length from sole of bare foot to ankle, knee, groin trochanters and crest of ilium. Circumference around ankle, calf, above calf, knee joint, above knee, mid-thigh, thigh, perineum, trochanters and crest of ilium. Make outline of limbs on paper and enclose with order and patient's shoes.



WALKING CALIPER

With or without knee joint. Adjustable above and below knee. Measurements required: Length from sole of bare foot to ankle, knee and groin. Circumference around ankle, calf, knee, above knee, mid-thigh, thigh and perineum. Make outline of limb on paper and enclose with order and patient's shoe.

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DR. H. R. CASPARIS

Professor of Pediatrics and Pediatrician-in-Chief, Vanderbilt University Medical School and Hospital, Nashville, Tenn.

Subjects:

1. The Basis for an Adequate Circulation in Children during Acute Dehydration.
2. Behavior of Children (and Adults) as a Medical Responsibility.
3. The More Common Allergic Manifestations in Children.
4. Basic Principles of Nutrition in Infants and Children as a Foundation for Later Health.

DR. WM. H. CRISP

Formerly Editor-in-Chief of the American Journal of Ophthalmology and Ophthalmic Year Book. Consultant, Denver General Hospital, Denver, Colo.

Subjects:

1. Pitfalls of the General Physician in Ocular Diagnosis.
2. Responsibility of the General Physician in Ocular Injuries.
3. Suggestions in Ocular Therapeutics.
4. Industrial Compensation Cases, including Medicolegal Testimony.

DR. TEMPLE FAY

Professor and Head of Departments of Neurology and Neurosurgery, Temple University Medical School, Philadelphia, Pa.

Subjects:

1. Observations on Refrigeration in Human Carcinoma.
2. Helpful Neurological Signs, as Diagnostic Aids, in General Problems of Medicine and Surgery.
3. The Treatment of Head Trauma.
4. The Present Day Concept of Epilepsy and Practical Methods of Treatment.

DR. WALTER A. FANSLER

Clinical Associate Professor of Surgery, Head of Proctologic Clinic, University of Minnesota and Minneapolis General Hospital, Minneapolis, Minn.

Subjects

1. Office Surgery in Rectal Diseases.
2. The Diagnosis and Treatment of Cancer of the Large Bowel.
3. Some Practical Points on Diagnosis and Management of Colitis.
4. Rectal Complications in Pregnancy.

DR. FRANCISCO de P. MIRANDA

Professor of Clinical Medicine, National University of Mexico, Member of the National Academy of Medicine and of Staff of General Hospital, Mexico City, D. F.

Subjects:

1. Glosso-gastro-anemic Syndrome.
2. Constitution and Growth.
3. High Altitude and Heart Disease.
4. Experience with Auricular Fibrillation.

DR. H. B. NICHOLS

Director of the Department of Roentgenology in the Cleveland Clinic. Formerly President of the Radiological Society of North America, Cleveland, Ohio.

Subjects:

1. Benign Lesions of the Kidney and Ureter Simulating Gastro-Intestinal and Other Abdominal Diseases.
2. Tumors of the Lung.
3. The Roentgenological Diagnosis and Treatment of Malignant Bone Tumors.
4. Tumors of the Kidney with Discussion of the Diagnosis and Treatment.

DR. THOS. B. SELLERS

Senior Gynecologist, Southern Baptist Hospital; Consulting Gynecologist Eye, Ear, Nose and Throat Hospital; Senior Visiting Surgeon, Charity Hospital of New Orleans, New Orleans, La.

Subjects:

1. Dysmenorrhea.
2. Breech Presentation.
3. Present Status of Pessaries in Armamentarium of the Obstetrician and Gynecologist.

MAJOR S. F. SEELEY, U. S. A., M. C.

Station Hospital, Fort Sam Houston, Texas.

Subject:

1. An Analysis of Shock Following Trauma.

DR. ROY W. SCOTT

Professor of Clinical Medicine of Western Reserve University; Physician - in - Chief, Cleveland City Hospital, Cleveland, Ohio.

Subjects:

1. The Problems of Arteriosclerosis from the Practitioner's Standpoint.
2. Diagnosis and Management of the Patient with Hypertension.
3. Angina Pectoris: Diagnosis and Treatment.
4. Coronary Thrombosis Diagnosis and Management.

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DR. JOHN A. C. COLSTON

Associate Professor of Urology at Johns Hopkins Medical School, Baltimore, Md.

Subjects:

1. A Comparison of the Efficacy of Sulfanilamide, Sulfapyridine and Sulfathiazole in the Treatment of Urinary Tract Infections.
2. Carcinoma of Prostate.
3. Tumors of the Kidney, Diagnosis, Differentia—of the types.
4. Obstruction at the Uretero-pelvic Junction.

DR. FRANKLIN EBAUGH

Professor of Psychiatry, University of Colorado Medical School; Director, Colorado Psychopathic Hospital, Denver, Colo.

Subjects:

1. Psychotherapy in the General Practice of Medicine.
2. Recent Developments in Psychiatry of General Medicine Import.
3. Problems in Psycho-somatic Medicine, Gastric Ulcer, Colitis, Asthma Anxiety.
4. Your Mental Health.

DR. TINSLEY HARRISON

Associate Professor of Medicine, Vanderbilt University, Nashville, Tenn.

Subjects:

1. Some Common Causes of Recurrent Attacks of Weakness.
2. The Bedside Diagnosis of the Common Cardiac Irregularities.
3. The Role of Diet in the Management of Cardiovascular Disorders.
4. Rest in Bed: Its Use and Abuse in the Treatment of Cardiovascular Disease.

DR. ROY D. McCLURE

Surgeon-in-Chief of Henry Ford Hospital; Extra Mural Lecturer, University of Michigan, Detroit.

Subjects:

1. Modern Treatment of Burns.
2. Surgical Treatment of Peptic Ulcer.
3. Use of Heparin in Treatment of Thrombosis and Embolism.
4. Diagnosis and Treatment of Cholecystitis.

DR. JOHN R. PAGE

Chairman of the Board of Surgeon Directors at the Manhattan Eye, Ear and Throat Hospital, New York. Formerly President of the American Otological Society, New York City.

Subjects:

1. The Bacteriology of Acute Middle Ear Infections and Its Clinical Significance.
2. The Treatment of Otitis Media Acuta.
3. The Simple Mastoidectomy.
4. The Surgical Treatment of Subacute and Chronic Otorrhea.

DR. FRANCIS M. RACKEMANN

Physician to the Massachusetts General Hospital. Lecturer in Medicine, Harvard Medical School, Boston, Mass.

Subjects:

1. Clinical Allergy.
2. Serum Disease and Serum Accidents.
3. Asthma.
4. The Treatment of Hay Fever and Asthma.

DR. A. PURDY STOUT

Associate Professor of Surgery, College of Physicians and Surgeons; Surgical Pathologist, Presbyterian Hospital, New York, N. Y.

Subjects:

1. Criteria of Operability in Cancer of the Breast.
2. Pathological Types of Malignant Gastric Tumors and Their Relationship to Prognosis and Treatment.
3. Tumors of Peripheral Nerves.
4. The possibility of Cure in Lymphosarcoma.

DR. JOHN WILSON

Clinical Professor, Orthopedic Surgery, University of Southern California, Los Angeles, Calif.

Subjects:

1. Hematogenous Acute Osteomyelitis: Its Diagnosis and Treatment.
2. Epiphyseal Disturbances of Childhood.
3. The Present Status of Treatment of Fractures of the Neck of the Femur.
4. Fracture of the Elbow in Children.

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Nashville, Tenn.

Dr. Franklin Ebaugh, University of Colorado Medical School
Denver, Colo.

Dr. A. Purdy Stout, College of Physicians and Surgeons
New York, N. Y.

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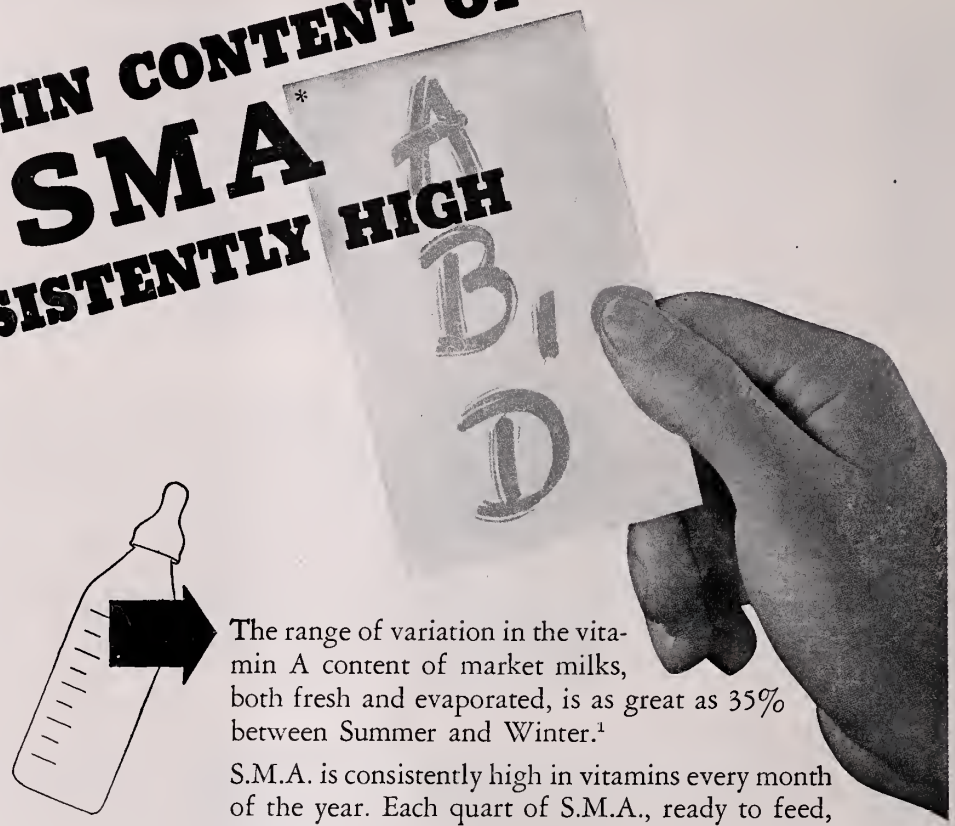

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INDEX

The use of the index will be facilitated by remembering that articles are often listed under more than one head. All items of the minutes of the annual session will be found under "Association," Auxiliary Notes and Auxiliary News under "Auxiliary Notes," Books reviewed under "Book Notes," County, District, and Clinical Society notes, under "Society News," Death Notices under "Deaths," Editorials under "Editorials" and the subject of the editorial, Propaganda for Reform, New and Nonofficial Remedies, and Physical Therapy items, under "Medicinal Remedies," News Notes under "News." Original Articles will be found under both the name of the author and the subject discussed. The abbreviations are as follows: (E), Editorial; (M), Miscellaneous; (O), Original Article.

A Page

Abdominal Conditions in Children, with Special Reference to the Mechanical Appendix (O), Dr. Alan Brown 482
Abortion, Habitual (O), Dr. Herbert Beavers 730
Adamson, Dr. W. B., and Dr. J. E. Storey (O), Observations on the Etiology of Polycythemia Vera 26
Ady, Mr. Roscoe (O), Fort Worth 810
Alien Registration (E), Dr. Holman Taylor 347
Allen, Dr. P. L. (O), Chromaffin Cell Tumor Associated with Paroxysmal Hypertension 540
Allergic Individuals, Theophylline and Propadrine (Padrophyll) in the Treatment of (O), Dr. A. H. Braden 546
A. M. A. Cleveland Session, Special Exhibits (M) 695
American Academy of Pediatrics Meeting, Region II (M) 695
American Conference on Industrial Health (N) 516
American Medical Association, Federal Prosecution (E), Dr. Holman Taylor 466
American Medical Association Meeting, Official Call (E), Dr. Holman Taylor 776
American Medical Association, The New York Meeting of the (E) Dr. Holman Taylor 208
Andujar, Dr. John J. (O), Training of Medical Technologists in Texas 503
Anemias of the Newborn Period (O), Dr. Boyd Reading 405
Anesthesia in Peroral Endoscopy (O), Dr. J. B. Nail 430
Anesthesia, Recent Progress in (O), Dr. A. E. Rovenstine 603
Annual Session, Honor Guests for the 1941 (E), Dr. R. B. Anderson 717
Annual Session, Hotel Rates Next (E), Dr. Holman Taylor 658
Annual Session, Local Committees for Fort Worth (E), Dr. Holman Taylor 657
Annual Session, Scientific Exhibits for Next (E), Dr. Holman Taylor 658
Annual Session Program, The Fort Worth (E), Dr. Holman Taylor 771
Annual Session, Program and Announcements, Seventy-fifth 814
Annual Session, Scientific Program for the Next (E), Dr. Holman Taylor 528
Anspach, Dr. H. M.: See Johnson, Dr. Jesse B., jt. auth.
Army Experience for Physicians (M) 52
Army Medical Library Desires Reprints (M) 511
Aspirin Poisoning (M) 600
Association, State Medical of Texas—
Transactions of the Seventy-Fourth Annual Session, Dallas 86
Combined Sections Meeting 144
General Meetings 131, 135, 144
House of Delegates, Membership of 86
House of Delegates, Minutes of 86, 136, 141
Message of the President 87
Reference Committees 87
Presentation of Ex-Presidents 132
Address of Fraternal Delegate from Louisiana State Medical Society 108
Of Dr. E. H. Cary 114
Of Dr. T. J. Crowe 126
Of Dr. Olin West 130
Of Dr. Curtice Rosser 131
Of Mrs. L. S. Thompson 131
Of Mrs. S. H. Watson 131
Of Dr. S. E. Thompson 133
Of Judge Guy C. Jackson 137
Of President-Elect Dr. Buie 143
Of President Dr. Hunt 144
Memorial Services 134
Deceased Members Woman's Auxiliary 134
Deceased Physicians 134

Page

Memorial Address 85
Report of the Secretary 89
Of Treasurer 91
Of Board of Trustees 92
Of Auditor 95
Of Board of Councilors 99, 127, 141
Of Council on Medical Defense 100
Of Executive Council 101
Of Council on Scientific Work 105
Of Council on Medical Economics 106
Of Committee on Health Problems in Education 109
Of Committee on Cancer 109
Of Committee on Transportation 110
Of Committee on Memorial Exercises 110
Of Committee on Scientific Exhibits 111
Of Committee on Medical Education and Hospitals 111
Of Committee on Revision of Constitution and By-Laws 112
Of the Advisory Committee to the Woman's Auxiliary 112
Of the Committee on Mental Health 113
Of Committee on Fractures 113
Of Committee on Maternal and Child Health 113
Of Committee on Tuberculosis 115, 136
Of Committee on Industrial Health 115
Of Committee on Malaria 116
Of Committee on Venereal Diseases 117
Of Committee on Postgraduate Medical Education 118
Of Committee on Pneumonia Control 120
Of Committee on Liaison Lone Star State Medical, Dental and Pharmaceutical Association 121
Of Committee on Scientific Awards 135
Of Fraternal Delegates 122, 123, 124
Of Reference Committee on Credentials 86, 126, 136, 141
Of Reference Committee on Finance 125
Of Reference Committee on Scientific Work 127, 130, 140
Of Reference Committee on Amendments to Constitution and By-Laws 128, 142
Of Reference Committee on Reports of Officers and Committees 128
Of Reference Committee on Resolutions and Memorials 140, 142, 143
Election of Officers 142
Auxiliary Notes—
Applewhite, Mrs. Scott Carter 159
Applewhite, Mrs. Scott C. Resigns 337
Auxiliary Organization 764
Auxiliary Public Relations 765
Baylor-Knox-Haskell Counties Auxiliary 66
Bexar County Auxiliary 649, 712, 847
Big Bend Counties Auxiliary 457, 712, 847
Bowie-Miller Counties Auxiliary 66, 161, 273, 521, 583, 649, 765
Brazos-Robertson Counties Auxiliary 522, 765
Brown-Comanche-Mills-San Saba Counties Auxiliary 765, 848
Cameron-Willacy Counties Auxiliary 161
Changes of Address 397
Cherokee County Auxiliary 161, 522
Childress-Collingsworth-Hall Counties Auxiliary 522
Dallas County Auxiliary 66, 161, 522, 650, 712, 765
Dallas Meeting 160, 848

Page

DeWitt-Lavaca Counties Auxiliary 161
Deaths 458, 584, 652, 713, 849
Ellis County Auxiliary 337, 583
Executive Board Meeting Date Changed 337
Falls County Auxiliary 848
Fourth District Auxiliary 584
Gray-Wheeler Counties Auxiliary 848
Harris County Auxiliary 522, 583, 650
Henderson County Auxiliary 522, 583, 712, 766
Hibbitts, Mrs. William 336
Hidalgo-Starr Counties Auxiliary 337, 397, 457, 766
Hunt-Rockwall-Rains Counties Auxiliary 583, 712
Index Auxiliary Transactions 189
Jasper-Newton Counties Auxiliary 161, 274, 583, 650
Jefferson County Auxiliary 522, 583, 650, 713, 766, 848
Johnson County Auxiliary 523, 713
Kerr-Kendall-Gillespie-Bandera Counties Auxiliary 161, 522, 651, 848
Lamar County Auxiliary 523
Lampasas-Burnet-Llano Counties Auxiliary 523
Liberty-Chambers Counties Auxiliary 651
McLennan County Auxiliary 66, 848
Message From the President 712
Nolan-Fisher-Mitchell Counties Auxiliary 523
Northeast Texas (Fifteenth) District Auxiliary 523
Northwest Texas (Thirteenth) District Auxiliary 67, 458
Notice 649, 764, 847
Obituary Notice 67
Officers Woman's Auxiliary 66, 159, 273, 336, 397, 456, 521, 583, 649, 712, 764, 847
South Texas District Auxiliary 651, 847
State Executive Board Meeting 456
Tarrant County Auxiliary 66, 161, 583, 651, 766, 849
Taylor-Jones Counties Auxiliary 584
Tom Green Eight County Auxiliary 66, 457, 523, 584, 651, 713, 766, 849
Transactions Twenty-Second Annual Session of the Woman's Auxiliary, Dallas 162
Travis County Auxiliary 523, 849
Twelfth (Central Texas) District Auxiliary 397
Washington County Auxiliary 523, 651, 766, 849
Welcome, Mrs. J. F. McVeigh 847
Wichita County Auxiliary 67, 274

B

Bacterial Vaccine and the Common Cold (M) 510
Baker, Dr. J. N. (O), The Expanding Field of Public Health Activities 43
Barr, Dr. Tom: See Small, Dr. Andrew B., jt. auth.
Bass, Dr. J. W. (O), The Educational Needs of the Health Officer 684
Bassel, Dr. P. M., and Dr. B. N. Blanton (O), So-Called Old Age Strokes 670
Beavers, Dr. Herbert (O), Habitual Abortion 730
Benign Lesions of the Duodenum (O), Dr. R. T. Wilson 797
Bodansky, Dr. M. (O), Biochemical Aspects of Hematology 415
Bohls, Dr. S. W. (O), Chorio-Allantoic Membrane Infection as a Diagnostic Test for Smallpox 242
Bone Disease in Children: Orthopedic Features (O), Dr. G. W. N. Eggers 7
Bone Disease in Children: Radiologic Features (O), Drs. Jesse B. Johnson and H. M. Anspach 5
Beck, Dr. Claude S. (O), Extrinsic Lesions of the Heart 468
Beck, Dr. Claude S. (O), Trauma to the Heart 660
Blanton, Dr. B. N.: See Bassel, Dr. P. M., jt. auth.
Blood Donors, Organized Volunteer (M) 46
Blood Dyscrasias Treated by Splenectomy (O), Dr. Howard Dudgeon, Jr. 664
Book Notes—
Bacillary and Richettsial Infections, Acute and Chronic 849
Bedside Diagnosis and Treatment, Practical 337
Biochemistry of Disease 338
Cancer in Childhood 652
Chemotherapy and Serum Therapy of Pneumonia 459
Clinical Diabetes Mellitus and Hyperinsulinism 714
Clinical Heart Disease 584

Page

Clinical Practice in Infectious Diseases 652
Clinical Roentgenology of the Alimentary Tract 158
Demonstrations of Physical Signs in Clinical Surgery 275
Dermatologic Therapy in General Practice 398
Diabetic Manual, Simplified 524
Diagnosis and Treatment of Cardiovascular Disease 850
Diagnostic Bacteriology, Methods for 714
Diseases of the Foot 157
Electrocardiography 458
Electrocardiographic Patterns, Their Diagnostic and Clinical Significance 337
Elmer and Rose' Physical Diagnosis 524
Essentials of Applied Medical Laboratory Technic 158
Essentials of the Diagnostic Examination 397
Fractures 68
Fractures, Dislocations and Epiphyseal Separations 158
Frank Howard Lahey Birthday Volume 458
Fundamentals of Biochemistry in Relation to Human Physiology 67
Getting Ready to be a Mother 525
Hematology, Principles of 458
Hugh Young 768
Lane Medical Lectures 67
Leprosy 585
Manson's Tropical Diseases 585
Minor Surgery 460
Modern Dermatology and Syphilology 523
Neoplastic Diseases 398
New and Nonofficial Remedies 459
Nutrition in Pediatric Practice, The Newer 338
Obstetrical Practice 274
Obstetrics in General Practice 849
Office Urology 767
Physical Diagnosis 713
Pneumoconiosis (Silicosis), The Story of Dusty Lungs 158
Principles and Practice of Aviation Medicine 275
Sex and Internal Secretions 767
Shock, Blood Studies as a Guide to Therapy 275
Surgical Treatment, Instruments and Appliances, Illustrations of 524
Synopsis of Materia Medica, Toxicology, and Pharmacology 767
Taber's Cyclopedic Medical Dictionary 714
Textbook of Medicine 653
Textbook of Pathology 652
Virus and Rickettsial Diseases with Especial Consideration of Their Public Health Significance 67
Vitamin Therapy in General Practice 768
Yearbook of Public Health, The 1940 850
Braden, Dr. A. H. (O), Theophylline and Propadrine (Padrophyll) in the Treatment of Allergic Individuals 546
Brandenstein, Dr. Luise: See Cairns, Dr. A. B., jt. auth.
Britain To License U. S. Physicians (M) 639
Brock, F. D. (O), Activities of the Bureau of Food and Drugs of the Texas State Department of Health 440
Bronchial Asthma, an Evaluation of Iodized Oil as a Therapeutic Agent in the Treatment of (O), Dr. George J. Seibold 386
Bronchoscopy in Lung Cancer (M) 254
Brown, Dr. Alan (O), Abdominal Conditions in Children, with Special Reference to the Mechanical Appendix 482
Brown, Dr. Alan (O), A Consideration of Some Common Pediatric Problems 778
Brown, J. J. (O), New Developments in Crippled Children's Work 47
Brown, Dr. Porter (O), Clinical Diagnosis of Early Syphilis 745
Bureau of Food and Drugs of the Texas State Department of Health, Activities of the (O), F. D. Brock 440
Burleson, Dr. John H., and Dr. M. W. McCurdy (O), Is the Operation for Senile Cataract on an Ambulatory Patient Justifiable? 680

C

Cain, Dr. J. C. (O), Hemochromatosis—Report of Six Cases 356
Cairns, Dr. A. B., and Dr. Luise Brandenstein (O), The Weltmann Reaction in Malignant Disease 22

Page

Calculi in the Lower Ureter, The Management of (O), Dr. J. R. Reagan 608
Caldwell, Dr. George T. (O), The Glands of the Posterior Female Urethra 627
Cancer Control Month (E), Dr. Holman Taylor 776
Cancer—Lest We Forget (E), Dr. Holman Taylor 346
Of the Breast, The Diagnosis and Management of (O), Dr. Arthur C. Christie 722
Of the Larynx, Selective Treatment of (O), Dr John H. Foster 370
Of the Pharynx, The Diagnosis and Treatment of (O), Dr. Arthur C. Christie 490
Of the Uterus (O), Dr. H. M. Tigert 673
Preoperative Radiation of Breast (O), Dr. Eugene V. Powell 620
Carcinoma of the Anorectal Region, Squamous Cell (O), Dr. Jack G. Kerr 548
Carcinoma of the Gallbladder (O), Dr. I. L. Van Zandt 616
Chagas Disease (E), Dr. R. B. Anderson 466
Change in the Official Family (E), Dr. Holman Taylor 467
Changes in the Official Family, More (E), Dr. Holman Taylor 535
Changes of Address 157, 273, 336, 456, 521, 582, 649, 763, 846
Christie, Dr. Arthur C. (O), The Diagnosis and Management of Cancer of the Breast 722
Christie, Dr. Arthur C. (O), The Diagnosis and Treatment of Cancer of the Pharynx 490
Chromaffin Cell Tumor Associated with Paroxysmal Hypertension (O), Dr. P. L. Allen 540
Chronic Peritonitis, New Type of (M) 695
Civil Service Examinations, United States (M) 389, 754
Clark, Dr. W. A., and Dr. Truett Gandy (O), Occult Syphilis 367
Clarkson, Dr. A. M. (O), Compulsory Laboratory Tests 618
Climacteric, The (O), Dr. J. H. McLean 377
Collins, Dr. Bailey R. (O), Sulfanilamide: Its Mode of Action and Toxic and Untoward Effects 229
Collom, Dr. S. A., Jr. (O), Fracture of the Femur 601
Concentrated Plasma Prepared by the Adtevac Process, The Intravenous Use of (O), Dr. J. M. Hill 223
Correction (M) 840
Correction—Committee Personnel (E), Dr. Holman Taylor 347
Crippled Children's Work, New Developments in (O), Mr. J. J. Brown 47
Crockett, Dr. R. H. (O), X-Ray Treatment of Ewing's Tumor 417
Crystalline Sulfanilamide In Compound Fractures (O), Drs. Walter G. Stuck, Ernest A. Maxwell, and R. N. O. Monsalvo 225
Curb, Dr. D. L. (O), The Hippuric Acid Synthesis Test for Liver Function 292
Curtis, Dr. R. C. (O), Present Status of Clinical Roentgen Therapy 559
Cutaneous Precancerosis (O), Dr. Lee E. Edens 29

D

Daily, Dr. Ray K. (O), Ophthalmoplegic Migraine 802
Dallas Annual Session, The (E), Dr. Holman Taylor 72
Dallas is Ready and Waiting (E), Dr. Holman Taylor 1
Dallas Southern Clinical Society (E), Dr. Holman Taylor 655
Deaths—
Applewhite, Dr. Henry L. 525
Benton, Dr. J. W. 526
Boothe, Dr. Sterling Price 399
Braly, Dr. Donnell Bone 159
Britton, Dr. James Madison 850
Byrd, Dr. Edwin Louis 68
Chandler, Dr. C. E. 68
Cook, Dr. Charles Pierce 339
Daly, Dr. J. M. 768
Dixon, Dr. Charles David 769
Dodson, Dr. Wm. Milton 851
Elliott, Dr. Owen Carpenter 769
Engle, Dr. Clifford Gordon 585
Faulkner, Dr. C. F. 586
Fuller, Dr. J. E. 398
Geer, Dr. Robert H. 586
Gober, Dr. J. M. 69

Page

Gray, Dr. Carey Andrew 586
Gray, Dr. E. N. 587
Guynes, Dr. John T. 462
Hamm, Dr. Edward Field 851
Hannah, Dr. Calvin Richards 715
Harlan, Dr. Wm. J. 276
Harper, Dr. W. A. 769
Harris, Dr. Joseph Pink 340
Harris, Dr. Lawrence R. 460
Higgins, Dr. D. M. 525
Hilliard, Dr. Horace H. 588
Hook, Dr. Charles O. 852
Hull, Dr. John Claude 526
Israel, Dr. Sidney 461
Jackson, Dr. Ralph S. 339
Jones, Dr. Everett 461
Keith, Dr. Uel 716
Kelton, Dr. Leslie Eugene 339
King, Dr. John C. 276
La Rue, Dr. Robert Lee 342
Ledbetter, Dr. Edward Eugene 852
Lile, Dr. Henry A. 653
Martin, Dr. Thomas A. 276
McDaniel, Dr. Watt O. 460
McDonald, Dr. Joseph Edwin 69
Menefee, Dr. William E. 654
Michie, Dr. Joseph D. 400
Moore, Dr. R. D. 587
Morgan, Dr. T. M. 853
Noble, Dr. R. W. 340
Paige, Dr. Wendell Heath 853
Patterson, Dr. Charles U. 462
Pearson, Dr. Preston W. 588
Reveley, Dr. Samuel L. 853
Richardson, Dr. D. P. 69
Robbie, Dr. Mary King 70
Roberts, Dr. W. J. L. 854
Safford, Dr. Henry Towne, Jr. 770
Scott, Dr. Arthur Carroll 588
Simmons, Dr. William L. 653
Sinclair, Dr. T. A. 399
Sizer, Dr. E. M. A. 854
Sledge, Dr. John R. 341
Stricklin, Dr. Mark L. 770
Taylor, Dr. Sam Harmon 400
Taylor, Dr. Summerfield M. 341
Terrell, Dr. Frederick 70
Thorn, Dr. John Wm. 400
Turner, Dr. John Harolde 341
Vaughter, Dr. H. D. 526
Wadley, Dr. Samuel L. 654
Wilkes, Dr. William Orville 590
Withers, Dr. Isaac A. 716
Yates, Dr. John S. 159
Yeager, Dr. Robert Lee 342
Dental Public Health Program for the Preschool-Age Child, The Significance of (O), Dr. F. C. Elliott 688
Differential Diagnosis of Diseases with Hemorrhagic Manifestations (O), Dr. Frank J. Heck 536
Doctor and the Draft (E), Dr. Holman Taylor 775
Doctors Needed for Medical Positions (M) 511
Double Chins, Exercise Won't Prevent (M) 640
Dudgeon, Dr. Howard Jr. (O), Blood Dyscrasias Treated by Splenectomy 664
Dues, Last Minute (E), Dr. Holman Taylor 3
Dues, The Early Payment of (E), Dr. Holman Taylor 535
Duren, Dr. Norman: See Singleton, Dr. Albert O., jt. auth.

E

Edens, Dr. Lee E. (O), Cutaneous Precancerosis 29
Editorials—
Alien Registration 347
American Medical Association, Federal Prosecution 466
American Medical Association Meeting, Official Call 776
American Medical Association, The New York Meeting of the 208

Page

Annual Session, Honor Guests for the 1941 717
Annual Session Hotel Rates, Next 658
Annual Session, Local Committees for Fort Worth 657
Annual Session Program, The Fort Worth 771
Annual Session, Scientific Exhibits for Next 658
Annual Session, The Scientific Program for the Next 528
Cancer Control Month 776
Cancer—Lest We Forget 346
Chagas Disease 466
Change in the Official Family 467
Changes In the Official Family, More 535
Chiropractic Legislation Under Way 656
Correction—Committee Personnel 347
Dallas Annual Session 72
Dallas is Ready and Waiting 1
Dallas Southern Clinical Society 655
Doctor and the Draft 775
Dues, Last Minute 3
Dues, The Early Payment of 535
Election of Officers of County Medical Societies 534
Health and Accident Insurance, A Report on 405
House of Delegates at Dallas 73
Hunt, Dr. Preston 71
International Post-Graduate Medical Assembly of Southwest Texas, Inc. 591
Legislative Situation at Austin 719
Legislature, Again the 593
Legislature Continues to Grind 773
Library Association Endowments, Texas Memorial Medical 207
Library Committee, A 3
Local Committees Fort Worth Annual Session 657
Medical Aspects of the Draft 464
Medical Foundations, Recognition of Lay Directed Quasi 529
Medical Preparedness 277
Medical Preparedness Efforts Continued 468
Medical Preparedness Lagging in Texas 343
Medical Preparedness Progress 402
Medical Preparedness Questionnaire, Last Call 658
Medical Service for the Draft Boards 404
Medical Service for Our Military Training Program 527
Medical Service in Texas, N. Y. A. 592
Membership for the Coming Year, Our 595
Membership Status of Those of Our Number Who Have Been Called to the Colors 596
Military Service, Plan for Procurement of Physicians for 721
New York Meeting of the American Medical Association 208
New York Next 2
New York, The House of Delegates at 209
Official Family for the Current Year 279
Oklahoma City Clinical Society 347
Physicians' Directory, A New Arrangement of the 4
Physicians for Military Service and Civil Practice, A Questionnaire on the Availability of 775
Post Graduate Medical Assembly of South Texas 401
Prescribing Alcoholic Liquor 594
Selective Service Law, Application to the Physician of 465
Southern Medical Association 597
Tarrant County Medical Society Fall Clinic 348
Technical Exhibits at Dallas 77
Texas Social Hygiene Association 78
Venereal Disease Control Program in Texas 529
Venereal Disease in Texas, Is New Legislation Needed to Control? 532
Vital Statistics a National Defense Necessity 344
Volume XXXVI 777

Eggers, Dr. G. W. N. (O), Bone Disease in Children: Orthopedic Features 7
Election of Officers of County Medical Societies (E), Dr. Holman Taylor 534
Elliott, Dr. F. C. (O), The Significance of a Dental Public Health Program for the Preschool-Age Child 688
Endocrine Factor in Dysfunction of the Organs of Special Sense (O), Dr. Harold L. Warwick 438

Page

Endocrines in Gynecology and Obstetrics with Special Reference to Stilbestrol in the Treatment of Uterine Bleeding—Original Research on Menstruation (O), Dr. Karl Karnaky 379
Endometriosis (O), Dr. Holland M. Tigert 728
Ewing's Tumor, X-Ray Treatment of (O), Dr. R. H. Crockett 417
Eye Care During Convalescence (M) 695

F

Female Urethra, The Glands of the Posterior (O), Dr. George T. Caldwell 627
Fort Worth (O), Mr. Roscoe Ady 810
Foster, Dr. John H. (O), Selective Treatment of Cancer of the Larynx 370
Fracture of the Femur (O), Dr. S. A. Collom, Jr. 601
Furman, Dr. John M. (O), Memorial Address 85

G

Gallbladder, Interpretation of the Visualized (O), Dr. George Turner 692
Gandy, Dr. D. Truett: See Clark, Dr. W. A., jt. auth.
Garrett, Dr. L. M. (O), The Roentgenologic Diagnosis of Diseases of the Stomach 799
Gastroscope: Foreign Bodies in the Stomach Observed Through the, Report of Five Cases (O), Drs. Cecil O. Patterson and Milford O. Rouse 238
Giles, Dr. Roy G. (O), Intensive Irradiation in the Treatment of Hyperthyroidism 675
Goff, Dr. G. F. (O), The Repair of Cystocele, Rectocele and Prolapse 733
Greenwood, Dr. James, Jr. (O), Space-Occupying Lesions of the Spinal Canal 305
Greer, Dr. Alvis E. (O), The Place of Vitamin K in Hemorrhagic Diseases 218
Grogan, Dr. Roy Lee (O), Prenatal Blood Changes 494
Grunbaum, Dr. Franz V. (O), The Systematic Use of Strophanthin in the Treatment of Decompensation of the Heart 476
Gynecology, Factors Contributing to Error in Diagnosis in (O), Dr. M. S. Seely 556

H

Hawkins, Dr. C. P. (O), A Few Notes on Prenatal Care 738
Health and Accident Insurance, A Report on (E), Dr. Holman Taylor 405
Health and Accident Insurance for the Medical Profession, Report on (M) 445
Health Officer, The Educational Needs of the (O), Dr. J. W. Bass 684
Health Services, Some Considerations in the Planning of State and Local (O), Dr. W. C. Williams 747
Heck, Dr. Frank J. (O), Iron Requirements in Childhood and Adult Life 286
Heck, Dr. Frank J. (O), The Differential Diagnosis of Diseases with Hemorrhagic Manifestations 536
Hematology, Biochemical Aspects of (O), Dr. M. Bodansky 415
Hematopoietic System, The Effect of Drugs on the (O), Dr. Moise D. Levy 410
Hemochromatosis—Report of Six Cases (O), Dr. J. C. Cain 356
Hemolytic Anemia, New Concepts of the Etiology of, and Their Relation to Diagnosis (O), Drs. W. D. Tigertt and Joseph M. Hill 214
Hemorrhages in Late Pregnancy and Early Puerperium (O), Dr. J. E. Kanatser 552
Hightower, Dr. L. P. (O), Undulant Fever 542
Hill, Dr. Joseph M.: See Tigertt, Dr. W. D., jt. auth.
Hill, Dr. J. M. (O), The Intravenous Use of Concentrated Plasma Prepared by the Adtevac Process 223
Hippuric Acid Synthesis Test for Liver Function (O), Dr. D. L. Curb 292
Horn, Dr. Will S. (O), Sulfanilamide in the Treatment of Undulant Fever 232
Hosen, Dr. Harris, and Dr. Furman Tyner (O), Treatment of Chronic Infectious Sinusitis 633
Hospitals, Building (M) 571
House of Delegates at Dallas (E), Dr. Holman Taylor 73

Page

Hunt, Dr. Preston (E), Dr. Holman Taylor 71
Hutchinson, Dr. Ben B. (O), A Study of Hypopyon Ulcer of the Cornea 40
Hutchinson, Dr. W. A. (O), Pellagra—Its Economic Importance 568
Hyoid Bursitis (O), Dr. L. A. Nelson 435
Hyperthyroidism, Intensive Irradiation in the Treatment of (O), Dr. Roy G. Giles 675
Hypopharyngeal Diverticulectomy Combined One Stage Operation (O), Drs. Andrew B. Small and Tom Barr 667

I

Index Auxiliary Transactions 189
Infant Death Rate Decreases, Nation's (M) 254
Infants Who Sleep With Eyes Open (M) 755
Infections of the Prostate Gland, The Treatment of (O), Dr. J. Rector Nicholson 19
Infectious Sinusitis, Treatment of Chronic (O), Drs. Harris Hosen and Furman Tyner 633
Inhaling of Shaved Hair (M) 254
International Association for Dental Research, The Houston Section (N) 516
International Post-Graduate Medical Assembly Guests (N) 452
International Post-Graduate Medical Assembly of Southwest Texas, Inc. (E), Dr. Holman Taylor 591
Internists Meeting, Texas Club of (M) 638
Interprofessional Conference on Child Development (N) 452
Iron Requirements in Childhood and Adult Life (O), Dr. Frank J. Heck 286
Irons, Dr. J. V.: See Bohls, Dr. S. W., jt. auth.
Israel, Dr. Sidney (O), The Modern Mastoid Operation Performed with the Electrically Driven Surgical Burs 563

J

Johnson, Dr. Jesse B., and Dr. H. M. Anspach (O), Bone Disease in Children; Radiologic Features 5

K

Kanatser, Dr. J. E. (O), Hemorrhages in Late Pregnancy and Early Puerperium 552
Karnaky, Dr. Karl John (O), Endocrines in Gynecology and Obstetrics with Special Reference to Stilbestrol in the Treatment of Uterine Bleeding—Original Research on Menstruation 379
Kerr, Dr. Jack G. (O), Squamous Cell Carcinoma of the Anorectal Region 548
Knoepp, Dr. Louis F. (O), The Evolution of Major Surgery in the Treatment of Pulmonary Tuberculosis 472
Kopecky, Dr. Leon C. (O), The Diagnostic and Prognostic Value of the Sedimentation Rate 302
Kracke, Dr. Roy R. (O), Infectious Mononucleosis 348

L

Laboratory Course for Technicians (M) 571
Laboratory Tests, Compulsory (O), Dr. A. M. Clarkson 618
Lawrence, Dr. David H., and J. E. Sorell (O), The State Reservoir of Malaria Therapy 246
Leave 'Em Where They Lie (M) 641, 694, 755, 840
Lees, Dr. Charles R. (O), The Place of Orthoptics in the Treatment of Extraocular Muscle Deficiencies 623
Legislation Under Way, Chiropractic (E), Dr. Holman Taylor 656
Legislative Situation at Austin (E), Dr. Holman Taylor 719
Legislature, Again the (E), Dr. Holman Taylor 593
Legislature Continues to Grind (E), Dr. Holman Taylor 773
Lesions of the Heart, Extrinsic (O), Dr. Claude S. Beck 468
Leukemias, The Acute (O), Dr. W. N. Powell 486
Levy, Dr. Moise D. (O), The Effect of Drugs on the Hematopoietic System 410
Library Association Endowments, Texas Memorial Medical (E), Dr. R. B. Anderson 207
Library Committee, A (E), Dr. Holman Taylor 3
Library Notes (M) 52, 147, 254, 328, 390, 446, 511, 573, 640, 696, 755, 840
Lincecum, Dr. Gideon, A Pioneer Texas Emasculator (O), Dr. Pat Ireland Nixon 34
Low Oxygen Environments, Exposure to (M) 640

Mc

Page

McCullough, Dr. Malcolm K. (O), Spasm of Inferior Oblique with Head Tilt 507
McCurdy, Dr. M. W.: See Burleson, Dr. John H., jt. auth.
McLean, Dr. J. H. (O), The Climacteric 377

M

Malaria Therapy, The State Reservoir of (O), Dr. David H. Lawrence, and J. E. Sorell 246
Marchman, Dr. O. M. (O), Systemic Infections as a Sequence of Paranasal Sinus Infection 742
Mastoid Operation Performed with the Electrically Driven Surgical Burs, The Modern (O), Dr. Sidney Israel 563
Maternal and Child Health Committee Meeting, State Medical Association (M) 751
Maxwell, Dr. Ernest A.: See Stuck, Dr. Walter G., jt. auth.
Medical Aid to Britain (N) 642
Aspects of the Draft (E), Dr. Holman Taylor 464
Education Congress Date Set (M) 638
Foundations, Recognition of Lay Directed Quasi (E), Dr. R. B. Anderson 529
Officers, Government to Need Temporary and Part-Time Civilian (M) 445
Officers, Junior, Sought for Government Service (M) 444
Preparedness (E), Dr. Holman Taylor 277
Preparedness Efforts Continued (E), Dr. Holman Taylor 463
Preparedness Lagging in Texas (E), Dr. Holman Taylor 343
Preparedness Progress (E), Dr. Holman Taylor 402
Preparedness Questionnaire, Last Call (E), Dr. Holman Taylor 658
Service for the Draft Boards (E), Dr. Holman Taylor 404
Service for Our Military Training Program (E), Dr. Holman Taylor 527
Service for the National Youth Administration in Texas (M) 639
Service in Texas, N. Y. A. (E), Dr. Holman Taylor 592
Service, National Conference on (M) 695
Students, We (O), Dr. John W. Spies 38
Technologists in Texas, The Training of (O), Dr. John J. Andujar 503
Medicinal Remedies (M)—
Accepted Devices for Physical Therapy 54, 148, 256, 330, 513, 697
New and Nonofficial Remedies 53, 148, 255 329, 447, 512, 696
Propaganda for Reform 54, 149, 256, 330, 391, 448, 513, 697
Medicine, The Philosophy of (O), Dr. L. H. Reeves 80
Meetings and Clinics, Coming (M) 51, 145, 253, 328, 388, 444, 510, 570, 637, 694, 751, 839
Membership for the Coming Year, Our (E) Dr. Holman Taylor 595
Membership, State Medical Association of Texas, June, 1940 190
Membership Status of Those of Our Number Who Have Been Called to the Colors (E), Dr. Holman Taylor 596
Membership Woman's Auxiliary to the State Medical Association of Texas, May, 1940 180
Memorial Address (O), Dr. John M. Furman 85
Metrazol and Insulin Treatment in Psychiatry (O), Drs. A. J. Schwenkenberg and Robert E. Winn 296
Military Service, Plan for Procurement of Physicians for (E), Dr. Holman Taylor 721
Mononucleosis, Infectious (O), Dr. Roy R. Kracke 348
Monsalvo, Dr. Rudolph N. O.: See Stuck, Dr. Walter G., jt. auth.

N

Nail, Dr. J. B. (O), Anesthesia in Peroral Endoscopy 430
Nelson, Dr. L. A. (O), Hyoid Bursitis 435
New Deal, The Philosophy of a World Problem. A Doctor's Point of View (O), Dr. W. B. Russ 323
News—
Abbott Laboratories Fellowships in Chemistry 151
Alpha Omega Alpha 55
American Academy of Dermatology and Syphilology 642
Academy of Ophthalmology and Otolaryngology 393
Academy of Pediatrics, Regional Meeting of the 842
Academy of Physical Medicine 841

Page

Association for the Study of Goiter 703
Association of Industrial Physicians and Surgeons 57
Association of Obstetricians, Gynecologists and Abdominal Surgeons Foundation Award 842
Board of Obstetrics and Gynecology Examination 333, 392, 575, 703, 842
Board of Ophthalmology Examinations 332
College of Chest Physicians 57
College of Physicians 264
Congress of Physical Therapy 332
Conference on Industrial Health 516
Heart Association 56
Museum of Health Incorporated 392
Public Health Association Meeting 393, 842
Social Hygiene Association 703
Annual Congress on Industrial Health 642
Baylor Postgraduate Medical Course 263
Bexar County Tuberculosis Hospital Bond Issue Passage Celebrated 641
Biological Photographic Association 333
Birth Control League of Texas 55
Births 58, 264, 333, 453, 517, 643, 704, 758
Blood Donors, Nation-Wide Enrollment of Voluntary 392
Brazos County Venereal Disease Clinic 392
British Relief Society, Dallas 756
Brownwood Physicians and Dentists 573
Child's Clinic 842
City and Rural Health Conservation Winners 151
Clinic Building for Beaumont, New Medical 641
Clinic Building, Liberty County Given 574
Clinic, McLennan County Tuberculosis 702
Committee on Venereal Disease Control, State Medical Association 641
Cotton Belt Surgeons Association 757
Crazy Water Company, Mineral Wells, Given "Cease and Desist" Order 757
Council of Physicians and Social Workers Formed at Dallas Coördinating 703
Dallas County Medical Plan 332, 842
Dallas Medical and Hospital Facilities Increased 332
Dallas Southern Clinical Society 55, 574
"Doctors at Work" 452
Dr. White's Sanitarium, Wichita Falls, Under New Management 452
Electra Medical Clinic 574
Essay Contest 642
First Texas Chemical Manufacturing Company 264
Five County Military Sanitation Zone Established 702
Golf Tournament, A. M. G. A. 57
Graduate Training in Surgery 392
Hospital Association, The Texas State 55, 841
Baylor, Dallas, Blood Plasma and Serum Center Established 702
Bethania, Wichita Falls, Enlarged 841
Board, El Paso, City-County 756
Cameron, Sold 331
Clinic, Hooker 514
Cowper Clinic and 331
Foard County, New 55
For Cleveland, New 702
For Longview, New 55
Hermann, Ex-residents Association Meeting 331
John Sealy, Acquisition of Control of by University of Texas Regents Proposed 756
Lutheran, Cuero 574
Matagorda County, New 55
Northwest Texas 150
Perlman Memorial 150
Pittsburg Medical and Surgical 515
Staff, All Saints, Fort Worth 57
Bethania, Wichita Falls 701
City-County, Fort Worth 701
Denison City 756
Ennis, Municipal 574, 701
Gaston, Dallas 756
Harris Memorial Methodist, Fort Worth 701

Page

Hendrick Memorial, Abilene 701
Hillcrest Memorial, Waco 514
Jefferson Davis, Houston 702
Joanna McClelland Memorial, Waco 701
Methodist, Houston 702
Texas Children's 515
Vernon Clinic 841
Houston Public Health Institute 642
Institute for Health Agency Employees 56
International Association for Dental Research, The Houston Section 516
International College of Surgeons 758
International Post-Graduate Medical Assembly Guests 452
Internists, The Texas Club of 575, 757
Interprofessional Conference on Child Development 452
John Phillips Memorial Award 757
John Sealy Hospital Service Plan 264
Julius Rosenwald Clinical Society 150
Library for St Paul's Hospital, Dallas, New 575
Library, The National Health 575
Lubbock Plans for Care of Indigent 515
Marriages 58, 264, 333, 393, 453, 517, 576, 643, 703, 758, 843
Medical Aid to Britain 642
Medical Technologists, The Texas Society of 516
Mental Health and Guidance Conference 641
Narcotic Drug Traffic Halted 55
National Medical Association 453
National Negro Medical Association 263
New Orleans Graduate Medical Assembly 702
Obstetricians and Gynecologists, The Texas Association of 516
Offices Registry Medical Technologists American Society of Clinical Pathologists Moved 757
"Osler at Old Blockley" Unveiled 332
Osler Memorial at Blockley Dedicated 151
Pan American Congress of Ophthalmology Organized 642
Parke, Davis and Company 702
Pediatric Society, The Texas 574
Personals 57, 264, 333, 393, 453, 516, 575, 643, 703, 758, 842
Postgraduate Assembly of Negro Physicians in Texas 57
Course in Obstetrics 57
Courses in Obstetrics and Gynecology 575
Medical Assembly of South Texas 263
Refresher Course, Tenth District 331
President-Elect Buie Honored 452
Public Health Association, The Texas 516
Southwest Medical Foundation 756
Southwestern Medical Association 574
State Board of Medical Examiners, Texas 55
State Medical Association Committee on Venereal Disease Control 641
State Tuberculosis Sanatorium Motion Picture 264
State Tuberculosis Sanatorium Staff Homecoming 574
Surgical Instruments Donated to Britain 756
Surgical Society, Texas 56, 515
Tarrant County Doctors and Dentists Entertained 641
Texas Club of Internists 757
Texas Dermatological Association 515
Texas Radiological Society 702
Texas Society for Mental Hygiene 757
Tom Green County Endorses City-County Health Unit 55
Tri-State Medical Society of Texas, Louisiana and Arkansas 514
Tuberculosis Association, The Texas 150
University of Texas Postgraduate Medical Course 263
University of Texas School of Medicine 514
Venereal Disease Clinic for Navarro County 701
Venereal Disease Clinic for Robertson County 574
Venereal Disease Information 264
Wharton-Jackson Counties Medical Society Entertained 331
Wichita General Hospital Staff 263
X-ray Technicians, The Texas Society of 150
New York Meeting of the American Medical Association (E), Dr. Holman Taylor 208
New York Next (E), Dr. Holman Taylor 2
New York, The House of Delegates at (E), Dr. Holman Taylor 209

Page

Nicholson, Dr. J. Rector (O), The Treatment of the Prostate Gland ... 19
Nixon, Dr. Pat Ireland (O), A Pioneer Texas Emasculator, A Chapter from the Life of Dr. Gideon Lincecum ... 34
Northeast Texas Postgraduate Assembly (M) ... 638

O

O'Byrne, Dr. George T. (O), The Management of Premature Infants ... 363
Official Family for the Current Year (E), Dr. Holman Taylor 279
Oklahoma City Clinical Society (E), Dr. Holman Taylor ... 347
Old Age Strokes, So-Called (O), Drs. P. M. Bassel and B. N. Blanton ... 670
Ophthalmoplegic Migraine (O), Dr. Ray K. Daily ... 802
Orthoptics in the Treatment of Extraocular Muscle Deficiencies, the Place of (O), Dr. Charles R. Lees ... 623
Ovarian Surface, How Does the Follicle Reach the (O), Dr. Erwin O. Strassmann ... 313

P

Page, Dr. J. Herbert (O), Socialized Medicine—A Menace to Public Health ... 251
Paranasal Sinus Infection, Systemic Infections as a Sequence of (O), Dr. O. M. Marchman ... 742
Parenteral Fluid Therapy, an Evaluation of (O), Dr. J. W. Tottenham ... 373
Patterson, Dr. Cecil O., and Dr. Milford O. Rouse (O), Foreign Bodies in the Stomach Observed Through the Gastroscope: Report of Five Cases ... 238
Pediatric Problems, A Consideration of Some Common (O), Dr. Alan Brown ... 778
Pellagra—Its Economic Importance (O), Dr. W. A. Hutchinson ... 568
Perforating Wounds of the Eyeball, The Management of Certain (O), Dr. E. M. Sykes ... 497
Phillips, Dr. Charles (O), The Relationship Between Skin Cancer and Occupation in Texas: A Review of 1,569 Verified Lesions Occurring in 1,190 Patients ... 613
Physicians' Directory, A New Arrangement of the (E) Dr. Holman Taylor ... 4
Physicians for Military Service and Civil Practice, A Questionnaire on the Availability of (E), Dr. Holman Taylor ... 775
Physicians Needed for Army Service (M) ... 390
Pneumonia Control Committee Meeting, State Medical Association (M) ... 571
Pneumonia, Indications for Combining Serum and Sulfapyridine in (M) ... 660
Pneumonia, Treatment of with Sulfanilamide, Sulfapyridine and Its Allied Compounds ... 354
Poisoning by Food Claims 606 in 1938 (M) ... 237
Poisoning from Imbedded Bullet, Delayed (M) ... 607
Pollok, Dr. L. W. (O), The Surgical Treatment of Uterovaginal Prolapse ... 15
Polycythemia Vera, Observations on the Etiology of (O), Drs. W. B. Adamson and J. E. Storey ... 26
Post Graduate Medical Assembly of South Texas (E), Dr. R. B. Anderson ... 401
Powell, Dr. Eugene V. (O), Preoperative Radiation of Breast Cancer ... 620
Powell, Dr. W. N. (O), The Acute Leukemias ... 486
Pre-Employment Examinations (O), Dr. Ross Trigg ... 566
Premature Infants, The Management of (O), Dr. George T. O'Byrne ... 363
Prenatal Blood Changes (O), Dr. Roy Lee Grogan ... 494
Prenatal Care, A Few Notes on (O), Dr. C. P. Hawkins ... 738
Prescribing Alcoholic Liquor (E), Dr. Holman Taylor ... 594
Pressly, Dr. T. A. (O), Uterine Endometriosis ... 792
Program and Announcements of the Seventy-Fifth Annual Session of the State Medical Association of Texas ... 814
Program Related Organizations, State Medical Association of Texas ... 835
Program Twenty-Third Annual Session of the Woman's Auxiliary to the State Medical Association of Texas ... 837
Public Health Activities, The Expanding Field of (O), Dr. J. N. Baker ... 43

Page

Public Health and the Practice of Medicine (O), Dr. W. C. Williams ... 806
Pulmonary Tuberculosis, The Evolution of Major Surgery in the Treatment of (O), Dr. Louis F. Knoepp ... 472

R

Radiological Society Meeting, Texas (M) ... 638
Ratio of Marriageable Women and Men Disturbed by War (M) ... 242
Reading, Dr. Boyd (O), Anemias of the Newborn Period ... 405
Reagan, Dr. J. R. (O), The Management of Calculi in the Lower Ureter ... 608
Reddick, Dr. W. G. (O), Treatment of Pneumonia with Sulfanilamide, Sulfapyridine and Its Allied Compounds ... 354
Reeves, Dr. L. H. (O), The Philosophy of Medicine ... 80
Repair of Cystocele, Rectocele and Prolapse (O), Dr. G. F. Goff ... 733
Roentgen Therapy, Present Status of Clinical (O), Dr. R. C. Curtis ... 559
Roentgenologic Diagnosis of Diseases of the Stomach (O), Dr. L. M. Garrett ... 799
Rouse, Dr. Milford O.: See Patterson, Dr. Cecil O., jt. auth.
Rovenstine, Dr. E. A. (O), Recent Progress in Anesthesia ... 603
Russ, Dr. W. B. (O), The Philosophy of the New Deal, a World Problem, a Doctor's Point of View ... 323

S

Schwenkenberg, Dr. A. J., and Dr. Robert E. Winn (O), Metrazol and Insulin Treatment in Psychiatry ... 296
Sedimentation Rate, The Diagnostic and Prognostic Value of the (O), Dr. Leon C. Kopecky ... 302
Seely, Dr. M. S. (O), Factors Contributing to Error in Diagnosis in Gynecology ... 556
Seibold, Dr. George J. (O), An Evaluation of Iodized Oil as a Therapeutic Agent in the Treatment of Bronchial Asthma 386
Selective Service Law, Application of to the Physician (E), Dr. Holman Taylor ... 465
Selective Service Medical Appeal and Advisory Boards, Texas (M) ... 753
Senile Cataract, Is Operation for on an Ambulatory Patient Justifiable? (O), Drs. John H. Burleson and M. W. McCurdy ... 680
Skin Cancer and Occupation in Texas, The Relationship Between: A Review of 1,569 Verified Lesions Occurring in 1,190 Patients (O), Dr. Charles Phillips ... 613
Simpson, Dr. C. M. (O), Sulfanilamide in Urology ... 311
Singleton, Dr. Albert O., and Dr. Norman Duren (O), Tumors of the Salivary Glands ... 784
Small, Dr. Andrew B., and Dr. Tom Barr (O), Hypopharyngeal Diverticulectomy Combined One-Stage Operation ... 667
Smallpox, Chorio-Allantoic Membrane Infection as a Diagnostic Test for (O), Drs. S. W. Bohls and J. V. Irons, Sc. D. ... 242
Socialized Medicine—A Menace to Public Health (O), Dr. J. Herbert Page ... 251
Society News—County
Anderson-Houston-Leon ... 265, 643
Austin-Waller ... 334, 453, 704
Baylor-Knox-Haskell ... 58, 265, 334, 517
Bell ... 151, 758
Bexar ... 58, 59, 151, 265, 576, 577, 643, 644, 704, 705, 706, 759, 843
Big Bend (Pecos-Jeff Davis-Presidio-Brewster) ... 152, 334, 393, 645, 704, 759
Bowie ... 759, 760
Brazos-Robertson ... 517
Brooks-Duval-Jim Wells ... 707
Brown-Comanche-Mills-San Saba ... 60
Caldwell ... 707
Cass-Marion ... 60
Cherokee ... 645, 707
Clay-Montague-Wise ... 60, 152, 266, 517, 578, 645, 760
Coleman ... 517
Collin ... 646
Cooke ... 266, 334
Dallas ... 60, 267, 334, 517, 518, 578, 579, 707, 708, 760

Page

Dawson-Lynn-Terry-Gaines-Yoakum ... 709
Delta ... 454
Denton ... 153, 267, 843
Ector-Midland-Martin-Howard-Andrews-Glasscock ... 761
El Paso ... 61, 153, 267, 646
Galveston ... 153
Gonzales ... 646
Grayson ... 267, 843
Gray-Wheeler ... 709, 761
Grimes ... 518, 579
Guadalupe ... 761
Hale-Floyd-Briscoe-Swisher ... 267
Hardeman-Cottle-Motley-Foard ... 709
Hardin-Tyler ... 646, 844
Harris ... 61, 62, 153, 154, 267, 268, 269, 270, 271, 272, 646, 709, 761, 844
Harrison ... 647
Henderson ... 647
Hidalgo-Starr ... 393, 454, 579
Hunt-Rockwall-Rains ... 63, 155, 272, 335, 393, 454, 518, 579, 580, 647, 709, 761, 844
Hutchinson-Carson ... 710
Jasper-Newton ... 272
Jefferson ... 64, 155, 272, 335, 454, 519, 580, 647, 710, 762, 844
Karnes-Wilson ... 394, 762
Kaufman ... 648
Kimble-Mason-Menard-McCulloch ... 273, 519
LaSalle-Frio-Dimmitt ... 762
Liberty-Chambers ... 710
Milam ... 156, 520, 763
Nolan-Fisher-Mitchell ... 273, 520
Nueces ... 710
Palo Pinto-Parker ... 581, 710
Panola ... 648
Potter ... 65, 335
Runnels ... 156
Stephens-Shackelford-Throckmorton ... 648, 763
Tarrant ... 65, 156, 157, 273, 454, 520, 581, 648, 710, 711, 763, 845
Taylor-Jones ... 845
Titus ... 711
Walker-Madison ... 520
Wharton-Jackson ... 521, 845, 846
Wichita ... 273, 521, 582, 648
Williamson ... 394

Society News—District—
Eleventh ... 394, 840
Fourth ... 582
Northeast Texas (M) ... 389, 521
Northwest Texas ... 454
Seventh ... 394, 846
Southwest Texas (M) ... 146
Twelfth ... 397, 711

Sorell, J. E.: See Lawrence, Dr. David H., jt. auth.
Southern Medical Association (E), Dr. Holman Taylor ... 597
Spangler, Dr Davis (O), X-Ray Diagnosis of Diseases of the Esophagus ... 598
Spasm of Inferior Oblique With Head Tilt (O), Dr. Malcolm K. McCullough ... 507
Spearman, Dr. M. P., and Dr. W. E. Vandevere (O), Vaccinia with Ocular Complications ... 565
Spies, Dr. John W. (O), We Medical Students ... 38
Spinal Canal, Space-Occupying Lesions of the (O), Dr. James Greenwood, Jr. ... 305
Stevenson, Dr. C. A. (O), Roentgen Diagnosis of Calcified Pelvic Tumors ... 422
Stewart, Dr. C. Duncan: See Stroud, Dr. S. K., jt. auth.
Storey, Dr. J. E.: See Adamson, Dr. W. B., jt. auth.
Strassmann, Dr. Erwin O. (O), How Does the Follicle Reach the Ovarian Surface ... 313
Strophanthin in the Treatment of Decompensation of the Heart, The Systematic Use of (O), Dr. Franz V. Grunbaum ... 476
Stroud, Dr. S. K., and Dr. C. Duncan Stewart (O), Some Epithelial Tumors of the Eyelids and Their Management ... 426
Stuck, Dr. Walter G., Drs. Ernest A. Maxwell, and R. N. O. Monsalvo (O), Crystalline Sulfanilamide in Compound Fractures ... 225
Sugar Solutions, Dangers of Heavy (M) ... 254
Sulfanilamide Administration in Pregnancy (M) ... 33
Sulfanilamide and Streptococci (M) ... 328
Sulfanilamide for Meningitis (M) ... 510
Sulfanilamide in Compound Fractures, Crystalline (O), Drs. Walter G. Stuck, Ernest A. Maxwell, and R. N. O. Monsalvo ... 225
Sulfanilamide in the Treatment of Undulant Fever (O), Dr. Will S. Horn ... 232
Sulfanilamide in Urology (O), Dr. C. M. Simpson ... 311
Sulfanilamide: Its Mode of Action and Toxic and Untoward Effects (O), Dr. Bailey R. Collins ... 229
Sulfathiazole Contamination—Warning (M) ... 839
Sykes, Dr. E. M. (O), The Management of Certain Perforating Wounds of the Eyeball ... 497
Synthetic Female Sex Hormone (M) ... 313
Syphilis, Clinical Diagnosis of Early (O), Dr. Porter Brown ... 745
Syphilis, Occult (O), Drs. W. A. Clark and D. Truett Gandy ... 367
Syphilis, Second Evaluation Study of Serologic Tests for (M) ... 291
Syphilis Transmitted by Kissing (M) ... 305

T

Page

Tarrant County Medical Society Fall Clinic (E), Dr. Holman Taylor ... 348
Technical Exhibits at Dallas (E), Dr. Holman Taylor ... 77
Texas Allergy Association (M) ... 146
Association of Medical Anesthetists (M) ... 146
Association of Obstetricians and Gynecologists (N) ... 516
Dermatological Society (M) ... 146, 389, (N) 515
Neurological Society (M) ... 147, 751
Orthopedic Association (M) ... 146
Pediatric Society Celebrates Twentieth Anniversary (M) ... 839
Public Health Association (N) ... 516
Social Hygiene Association (E), Dr. Holman Taylor ... 78
Society of Gastro-Enterologists and Proctologists (M) ... 146
Society of Medical Technologists (N) ... 516
Society of X-Ray Technicians (N) ... 150
State Heart Association (M) ... 145
State Pathological Society Meeting (M) ... 751
Surgical Society (N) ... 515
Tuberculosis Association (N) ... 150
Thomas, Dr. Maxwell (O), Tuberculous Uveitis ... 319
Tigert, Dr. H. M. (O), Cancer of the Uterus ... 673
Tigert, Dr. Holland M. (O), Endometriosis ... 728
Tigertt, Dr. W. D., and Dr. Joseph M. Hill (O), New Concepts of the Etiology of Hemolytic Anemia and Their Relation to Diagnosis ... 214
Tottenham, Dr. J. W. (O), An Evaluation of Parenteral Fluid Therapy ... 373
Transactions Seventy-Fourth Annual Session State Medical Association of Texas, Dallas ... 86
Transactions Twenty-Second Annual Session of the Woman's Auxiliary to the State Medical Association of Texas ... 162
Trauma to the Heart (O), Dr. Claude S. Beck ... 660
Trigg, Dr. Ross (O), Pre-Employment Examinations ... 566
Tuberculous Uveitis (O), Dr. Maxwell Thomas ... 319
Tumors of the Eyelids and Their Management, Some Epithelial (O), Drs. S. K. Stroud and C. Duncan Stewart ... 426
Tumors of the Salivary Glands (O), Drs. Albert O. Singleton and Norman Duren ... 784
Tumors, Roentgen Diagnosis of Calcified Pelvic (O), Dr. C. A. Stevenson ... 422
Turner, Dr. George (O), Interpretation of the Visualized Gallbladder ... 692
Tyner, Dr. Furman: See Hosen, Dr. Harris, jt. auth.
Typhoid and Paratyphoid, Soluble Iodophthalein for Carriers of (M) ... 695

U

Ulcer of the Cornea, A Study of Hypopyon (O), Dr. Ben B. Hutchinson ... 40
Undulant Fever (O), Dr. L. P. Hightower ... 542
U. S. Supreme Court Has Not Ruled Medicine is a Trade (M) ... 389
Uterine Endometriosis (O), Dr. T. A. Pressly ... 792
Uterovaginal Prolapse, The Surgical Treatment of (O), Dr. L. W. Pollok ... 15

V

Vaccinia with Ocular Complications (O), Drs. M. P. Spearman and W. E. Vandevere ... 565
Vandevere, Dr. W. E.: See Spearman, Dr. M. P., jt. auth.
Van Zandt, Dr. I. L. (O), Carcinoma of the Gallbladder ... 616
Venereal Disease Control in Texas (E), Dr. R. B. Anderson ... 529
Venereal Disease in Texas, Is New Legislation Needed to Control (E), Dr. R. B. Anderson ... 532
Vital Statistics a National Defense Necessity (E), Dr. Holman Taylor ... 344
Vitamin B_1 Deficiency and Diabetes (M) ... 597
Vitamin B Therapy for Muscular Weakness (M) ... 22
Vitamin K in Hemorrhagic Diseases, The Place of (O), Dr. Alvis E. Greer ... 218
Vitamin P is Effective for Purpura (M) ... 572
Volume XXXVI (E), Dr. R. B. Anderson ... 777

W

Warning (M) ... 638
Warns Physicians of Swindling by Peddlers of Narcotics (M) ... 572
Warwick, Dr. Harold L. (O), The Endocrine Factor in Dysfunction of the Organs of Special Sense ... 438
Weltmann Reaction in Malignant Disease (O), Drs. A. B. Cairns and Luise Brandenstein ... 22
West Texas Postgraduate Assembly (M) ... 571
Williams, Dr. W. C. (O), Public Health and the Practice of Medicine ... 806
Williams, Dr. W. C. (O), Some Considerations in the Planning of State and Local Health Services ... 747
Wilson, Dr. R. T. (O), Benign Lesions of the Duodenum ... 797
Winn, Dr. Robert E.: See Schwenkenberg, Dr. A. J., jt. auth.
Woman's Auxiliary to the State Medical Association of Texas, Membership of ... 180
Woman's Auxiliary to the State Medical Association, Program Twenty-Third Annual Session ... 837
Woman's Auxiliary, Transactions of the Twenty-Second Annual Session ... 162

X

X-Ray Diganosis of Diseases of the Esophagus (O), Dr. Davis Spangler ... 598
X-Ray Hazards, Protection Against (M) ... 670

Annual Session, Dallas, May 13-14-15 and 16.

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CONTENTS

EDITORIALS— Page
- Dallas is Ready and Waiting 1
- New York Next 2
- Last Minute Dues 3
- A Library Committee 3
- A New Arrangement of the Physicians' Directory 4

ORIGINAL ARTICLES—
- Bone Disease in Children: Radiologic Features. *Jesse B. Johnson* and *H. M. Anspach* 5
- Bone Disease in Children: Orthopedic Features. *G. W. N. Eggers* 7
- The Surgical Treatment of Uterovaginal Prolapse. *L. W. Pollok* 15
- The Treatment of Infections of the Prostate Gland. *J. Rector Nicholson* 19
- The Weltmann Reaction in Malignant Disease. *A. B. Cairns* and *Luise Brandenstein* 22
- Observations on the Etiology of Polycythemia Vera. *W. B. Adamson* and *J. E. Storey* 26
- Cutaneous Precancerosis. *Lee E. Edens* 29
- A Pioneer Texas Emasculator. A Chapter from the Life of Dr. Gideon Lincecum. *Pat Ireland Nixon* 34
- We Medical Students. *John W. Spies* 38
- A Study of Hypopyon Ulcer of the Cornea. *Ben B. Hutchinson* 40
- The Expanding Field of Public Health Activities. *J. N. Baker* 43
- New Developments in Crippled Children's Work. *J. J. Brown* 47

MISCELLANEOUS—
- Coming Meetings and Clinics 51
- Library Notes 52

MEDICINAL REMEDIES—
- New and Nonofficial Remedies 53
- Accepted Devices for Physical Therapy 54
- Propaganda for Reform 54

News 55
Society News 58

AUXILIARY NOTES—
- Auxiliary News 66

Book Notes 67
Deaths 68

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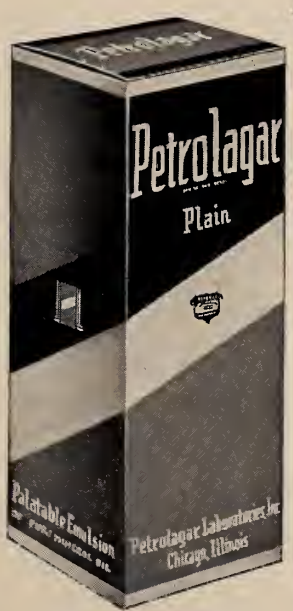

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CONTENTS

EDITORIALS— Page

The Fort Worth Annual Session 771
The Legislature Continues to Grind 773
The Doctor and the Draft 775
A Questionnaire on the Availability of Physicians for Military Service and Civil Practice 775
Cancer Control Month 776
Official Call American Medical Association Meeting 776
Volume XXXVI 777

ORIGINAL ARTICLES—

A Consideration of Some Common Pediatric Problems.
Alan Brown 778
Tumors of the Salivary Glands.
Albert O. Singleton and *Norman Duren* 784
Uterine Endometriosis.
T. A. Pressly 792
Benign Lesions of the Duodenum.
R. T. Wilson 797
The Roentgenologic Diagnosis of Diseases of the Stomach.
L. M. Garrett 799
Ophthalmoplegic Migraine.
Ray K. Daily 802
Public Health and the Practice of Medicine.
W. C. Williams 806
Fort Worth.
Roscoe Ady 810

PROGRAM and ANNOUNCEMENTS—

State Medical Association 814
Texas Railway and Traumatic Surgical Association 835
Texas Society of Gastro-Enterologists and Proctologists 835
Texas State Heart Association 835
Texas Allergy Association 836
Texas Orthopedic Association 836
Texas Association of Medical Anesthetists 836
Conference of County and City Health Officers 836
Texas Neurological Society 837
Organization Meeting Texas Chapter American College of Chest Physicians 837
Woman's Auxiliary 837

MISCELLANEOUS—

Coming Meeting and Clinics 839
Sulfathiazole Contamination—Warning 839
Texas Pediatric Society Celebrates Twentieth Anniversary 839
Eleventh District Medical Society Meeting 840
Library Notes 840
News 841
Society News 843
Changes of Address 846
Auxiliary Notes—
Auxiliary News 847
Book Notes 849
Deaths 850
Advertisers' Index 39

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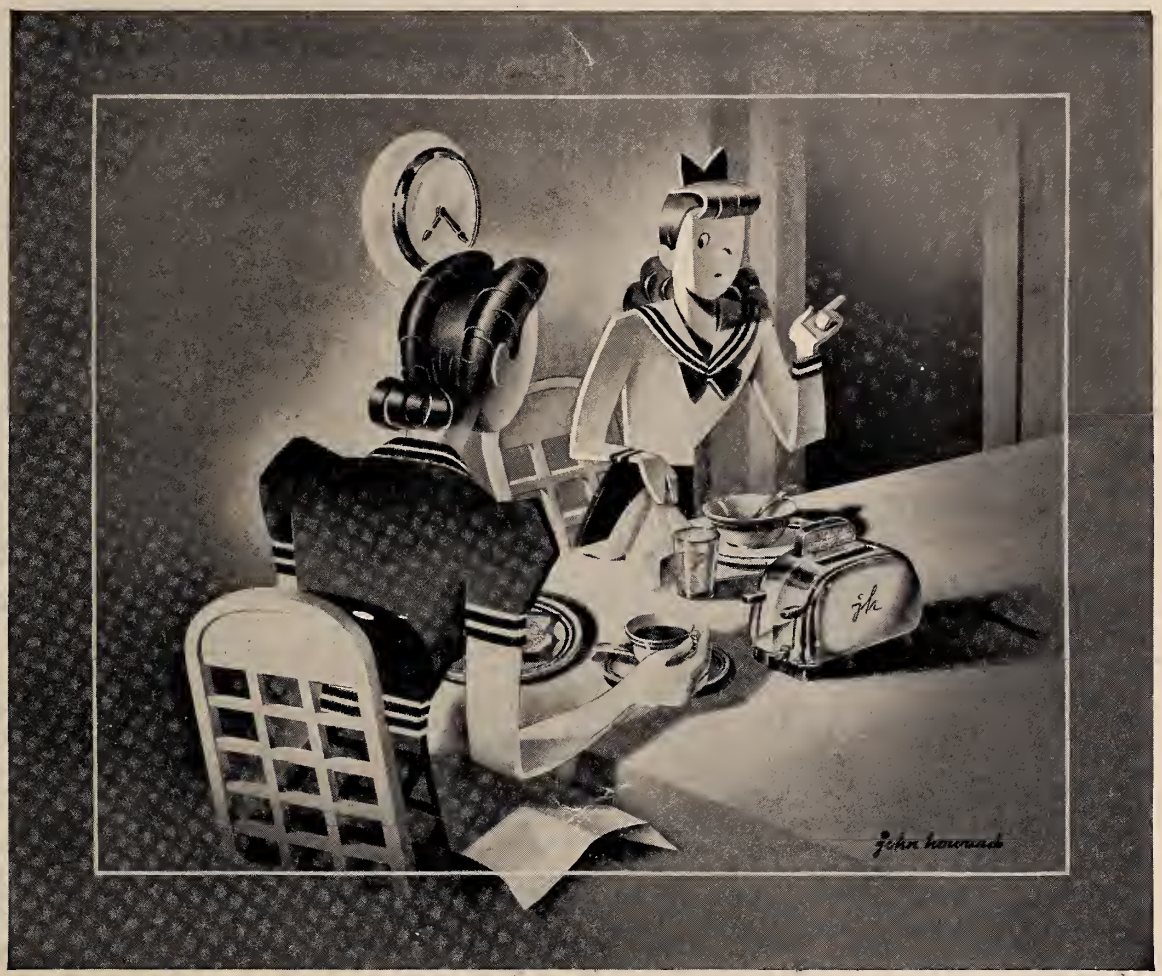

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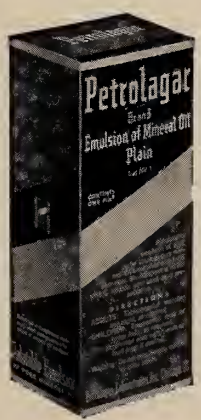

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